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the Accounting Review

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ACCOUNTING FOR FIXED ASSETS AND THEIR AMORTIZATION*

PAUL GRADY
Price Waterhouse & Co.

ACCOUNTING for the acquisition and construction of the fixed assets required in the production and distribution of goods and services obviously is important to business managements and to the accounting profession. It is important because the control of billions of dollars worth of assets are at issue and because the accounting distinctions to be drawn have significant effects upon the financial position of the business entities and their results of operations. It would not be possible within reasonable time limits to cover all of the aspects of accounting for fixed assets and their amortization. Accordingly, this paper is limited to a discussion of certain points which some may regard as controversial and to a consideration of the basic objectives of accounting for fixed assets from a financial viewpoint under current national and world conditions.

Accounting has been defined by the Committee on Accounting Procedure of the American Institute of Accountants as "the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character and interpreting the results thereof."[1] It will be noted that accounting is classified as an art, not a science. The committee has made clear in its first research bulletin that accounting is primarily utilitarian and historical in character and is predicated on conventions. The committee also stated in the first bulletin that "The uses to which the corporate system (including its accounting) is put and the controls to which it is subject change from time to time, and all parts of the machinery must be adapted to meet such changes as they occur."[2]

It should surprise no one that there have been changes in accounting concepts in the past fifty years of kaleidoscopic economic and political events and social movements. This period has witnessed wide discovery and utilization of natural resources, vast progress in the harnessing of machinery to increase productivity, together with the major dislocations in all phases of human activities and viewpoints resulting from two world wars.

Since the fixed assets and the related amortization accounts are continuing historical accounts, the present balances have obviously been affected by any changes made in accounting practice over the years resulting from changes in business conditions, in the purposes of the accounts and in mode of thought of various managements and their accounting advisors. The

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* This paper was delivered at the Graduate Study Conference, Rutgers University, September 8, 1949.

[1] Accounting Research Bulletin No. 7, p. 58.

[2] Parenthetical phrase not part of quotation.

accounting for fixed assets has also been greatly affected by Federal income tax practices and by a general rule of "conservatism" both in the distribution of costs between capital and operations and in the determination of depreciation and amortization.

The principal accounting points to be discussed regarding fixed assets and their amortization may be dealt with in relation to the following:

1. The accounting entity
2. Monetary basis for carrying fixed assets
3. Cost
4. Close relationship between intangible and tangible assets
5. Intangible fixed assets and their amortization
6. Tangible fixed assets and their amortization

THE ACCOUNTING ENTITY

It seems very strange that at the present advanced development of the competitive enterprise economic system of the United States, in which the prevalent form of business organization is the corporation, there should be any question as to the appropriate accounting entity. Most accountants would say that the present owner is the proper accounting entity, but they might encounter considerable difficulty in supporting their viewpoint by authoritative statements. The principal opposition viewpoints are those of the Federal regulatory commissions as evidenced by their administration of the so-called "original cost" provisions of the uniform systems of accounts for public utilities.

Actually the uniform systems of accounts provide that the utilities shall carry out classification of their plant accounts in such manner as to show both the *original costs* and *cost to the utility*. In 1939 and 1940 the special committee on public utility accounting of the American Institute of Accountants, of which I was chairman, prepared a memorandum dealing with the considerations which seemed to bear on the questions involved in determining original cost and corporate cost of utility properties. This memorandum did not attempt to set forth detailed rules, but contained the following conclusions:

> "First, That the primary basis of property accounting is as a matter of general theory cost to the corporation. Therefore, if enterprise cost is required to be recorded it follows that a reconciliation must be assured between enterprise cost and corporate cost, not only at the time when enterprise cost is first set up on the books but at all times thereafter.
>
> "Second, That in compiling the enterprise costs of utility properties, it is important to bear in mind that the accounting procedures of a corporation in allocation of charges as between property accounts and operating expenses must be regarded as a whole. Accounting errors (if of substance) should be corrected, whether such corrections increase or decrease property accounts."

The public utility committee felt that a statement such as the foregoing might prevent the emasculation of corporate cost and a "one-way street" practice in handling the adjustment of accounting errors, the staffs of the Commissions having already demonstrated tendencies in those directions. However, the Committee on Accounting Procedure of the Institute decided that no action should be taken at that time, presumably because it accepted at face value (1) the wording of the uniform systems, (2) the affidavits of chief accountants of many of the Commissions filed in the American Telephone and Telegraph case, affirming that the original cost requirements were merely a reclassification and that the total corporate costs of properties were not affected, and (3) a stipulation filed by the Attorney General on behalf of the Federal Communications Commission that legitimate costs of useful properties would not be written off and that adequate allowance would be made for depreciation of the investment in depreciable properties.

It is highly regrettable that the Federal

commissions have ignored the foregoing covenants and have required arbitrary write-offs of many millions of legitimate investments representing the difference between corporate cost and original cost. This arbitrary action is regrettable because of (1) the unjustified injuries inflicted on the utilities and their investors, (2) the weakening rather than strengthening of sound accounting principles and (3) the destruction of faith in the fairness of government agencies created to perform nonpartisan regulatory functions.

More specifically the following practices of the Federal commissions, particularly the Federal Power Commission, are subject to criticism from the standpoint of accounting principles:

1. The provisions of the Uniform System of Accounts have been interpreted as requiring an investigation of the policies followed by the company and all predecessor owners in accounting for all property additions as well as acquisitions. In this review and determination of original cost the Commissions insist on the removal of all items not now regarded as properly includable in plant account, on the basis that accounting errors should be corrected; but will not permit the inclusion of items originally charged to expense which are proper capital expenditures under the provision of the new system of accounts, on the theory that the company made an election of an accounting procedure at the time of the transaction by which it is irrevocably bound.

2. All items determined to represent excess over cost to affiliated companies have been reclassified as Account 107, which is the adjustment account for write-ups over corporate cost. This policy of following one uniform treatment for all intercompany items fails to give recognition to the fact that the items may cover the widest range, extending from the type of unjustifiable mark-up on a quick turnover of property, to an increment which is fully justified by the fair market value of the property or service at the time of the transactions.

3. Contrary to the provision of the Uniform System of Accounts, the Commissions apparently refuse to recognize the separate identification of the portion of the property-acquisition adjustment account representing investment in tangible properties and that representing intangibles thus preventing the proper accounting for the company's own investment.

4. The Commissions have taken the position that the entire property-acquisition adjustment account should be written off to surplus immediately or should be amortized by charges to other income deductions, which is below the net earnings line, over a relatively short period of years.

5. The commissions have interpreted acquisitions of an "operating unit or system" to mean practically any segment of a continuous structure, such as a transmission line or pipe line, or any property unit which had been used theretofore in any type of public utility service.

It will be obvious from the foregoing that the results obtained are not cost to the present owner, cost to the enterprise or even original cost to the person first devoting the property to public service; they are merely the lowest possible figures. These regulatory phases have been dealt with at some length in order to demonstrate the extent of departures from generally accepted accounting practice in dealing with bona fide corporate cost of fixed assets, and also to indicate the danger of extending a so-called "original cost" philosophy to all areas of the economy.

I believe that the accounting profession should take appropriate steps to emphasize that one of its basic concepts is that all matters of accounting for fixed assets or other items must be determined from the viewpoint of the legal entity which

now owns or controls them. In a report to the Executive Committee dated October 20, 1945, the Committee on Accounting Procedure said: "The monetary values at which a corporation's assets are carried should fairly reflect the corporate accountability for such assets; they form the basis for the determination of depreciation, depletion or amortization and profits and losses on sales." While this clearly indicates the committee's view, the point is of sufficient importance to merit a formal research bulletin with pertinent reasoning in support of the conclusion.

When a corporation is organized under the laws of a given state it is vested with all of the rights and powers to undertake almost any business activity that might be undertaken by natural persons. It has not only the right but an inherent responsibility of accounting to its investors for all assets turned over to it, in terms of its own costs or significant values. The creation of a new corporate entity and even the merger or consolidation of previously existing ones are almost always attended by sufficient changes in ownership or in the character of the enterprise as to create a new base line of accountability. Although economic realities must never be lost from sight, a heavy burden of proof should be imposed on those who wish to disregard or look through "mere corporate entities" in order to carry forward the accounting basis of predecessor owners. The adoption of the predecessor's cost or other monetary accounting basis may be justified only where (1) there has been no change of substance in the corporate entity (such as a mere change in domicile), or (2) the carrying amounts of the predecessors are the best evidence of current fair values to the present owner.

MONETARY BASIS OF ACCOUNTING FOR FIXED ASSETS

When fixed assets are acquired or are newly constructed, "cost" ordinarily is in agreement with "value." Under these conditions there is usually no question that cost represents the most significant monetary measurement of corporate accountability. Subsequent to acquisition, economic events may cause great variances in the "value" of the fixed assets in comparison with the cost less reasonable depreciation. The probability of such changes has caused the accounting profession, despite a strong inherent leaning toward cost, to leave the road open for revaluation of fixed assets when cost is no longer significant.

Viewpoints of recognized accounting authorities selected at approximately ten-year intervals are quoted below:

In 1904 A. Lowes Dickinson in a paper on "The Profits of a Corporation" read at the First International Congress of Accountants said:

> "This definition would permit any business concern to revalue periodically the whole of its assets and liabilities and to record the difference between its surplus so ascertained at the commencement and the end of the year as its Profit or Loss, respectively; and provided that this estimate were fairly and reasonably made, there would be no objection to such a course. In other words, every appreciation of assets is a Profit, and every depreciation a Loss; and in many private concerns this method, technically known as 'Single Entry,' of ascertaining profits has been regularly adopted for years without bad results."[3]

Mr. Dickinson, in 1913, said:

> "It is necessary to recognize that there are causes at work, particularly in young and growing communities, which may render a statement prepared on the basis of cost of capital assets misleading and even prejudicial to the proper interest of present owners."[4]

In 1922 R. H. Montgomery said:

> "The term 'fixed assets' includes land, buildings, machinery and equipment, tools,

[3] "Official Record," Congress of Accountants, 1904, p. 172.
[4] "Accounting Practice and Procedure," 1913, p. 80.

patterns and drawings, furniture and fixtures, at cost less normal depreciation. When appraisals are made in which appreciation is included, there is no objection to setting up appraised values in balance sheets, provided the valuation is qualified by an explanation and provided the excess of the appraisal above book value is credited to special or capital surplus and is not merged in earned surplus."[5]

The Special Committee on Cooperation with Stock Exchanges of the American Institute of Accountants in a letter to the New York Stock Exchange dated September 22, 1932 (Audits of Corporation Accounts 1932–1934) undertook to list certain generally accepted accounting principles. It is significant that the committee did not include any prohibition against revaluation of fixed assets.

In 1945 the Committee on Accounting Procedure of the American Institute of Accountants in a letter addressed to the Executive Committee said:

> "The monetary values at which a corporation's assets are carried should fairly reflect the corporate accountability for such assets; they form the basis for the determination of depreciation, depletion, or amortization and profits and losses on sales. For these purposes, cost is normally appropriate .... It is recognized that there are situations, however, under which the recorded monetary values of corporate assets are no longer significant measurements of the accountability of the corporation for these assets."

In his book "Financial Accounting" Mr. George O. May has devoted a complete chapter to a comprehensive discussion of "cost and value." Mr. May states (pp. 101–102):

> "The conclusion to which this discussion leads is that primarily the accounting for fixed assets should be based on cost, but that perhaps the strongest argument in favor of this procedure is the difficulty and uncertainty that are encountered in determining value. Therefore, where despite these difficulties it is clear that the existing value is markedly at variance with a book value determined on the basis of cost, it should be regarded as permissible and in some cases desirable to recognize current values in the books of account and in financial statements prepared therefrom. However, such readjustments should not be lightly undertaken and should in all cases be subject to the approval of stockholders, given with a formality comparable to that required for the purpose of actual reorganization. Care should be exercised to distinguish between readjustments which represent corrections of past estimates of depreciation and those due to causes to which recognition is not ordinarily given in current accounting practice. In all cases the fullest consideration should be given to the equitable rights of different classes of stockholders in determining whether a readjustment shall be affected and what changes in the method of determining income may properly result therefrom."

From the foregoing it will be evident that managements of business have the option of revaluing fixed assets whenever they can demonstrate that cost is no longer a significant measure of corporate accountability. Changes of value in relation to cost, of course, may result from (a) circumstances entirely independent of general price level variations, and (b) they may be directly attributable to changes in the purchasing power of money. Since the accountant disclaims qualifications as an appraiser of fixed assets and also wishes to maintain a strict distinction between realized and unrealized gains, it is natural that he should take the position that management must assume the initiative and responsibility for revaluations resulting from the first class of change. With respect to the second type of change, attributable to important variations in purchasing power of money, the accountant has been loath to depart from the postulate that the monetary unit is substantially stable in value, even though he knows the postulate has been invalidated by the inflation which accompanied the war and post-war period.

In certain countries, where inflation has been more extreme than in the United States, revaluation of fixed assets has been

[5] "Auditing, Theory and Practice," 1922, p. 173.

sanctioned by legislation. In this country, as you well know, our literature has been weighted with arguments for and against accounting recognition of the change in purchasing power of the dollar in reference to fixed assets, but the question has not been resolved.

It has seemed to me in reviewing articles and listening to discussions that many accountants base their opposition to recognition of current dollar costs in the amortization of fixed assets on method more than on principle. Our first approach should be to consider, as a matter of principle, whether the customary historical costing of fixed assets fulfills the basic accountability objectives of industry under current conditions. If we conclude that it does not, it should not prove too difficult to find suitable methods of revision. It is my own view that we would be taking a very short-sighted viewpoint to hold that significant changes in the value of money cannot be dealt with in accounting. Accordingly, I believe we should take a positive stand that fixed asset accounts should be dealt with in terms of current monetary units, wherever the historical cost-units are materially at variance with the current units.

COST

In the review of financial statements contained in 578 reports to stockholders for the year 1947, the Research Department of the American Institute of Accountants found that in 363 cases the gross tangible fixed assets were carried at "cost." If we had full information on all of the past and present practices of these companies in dealing with the distribution of all charges it is quite likely that cost of the fixed assets would not mean exactly the same thing in any two cases. The various factors causing the differences may have prompted one of our well known economists to make the following characterization of cost:

> "The first problem is the scientific delimitation of costs. That is a problem of classification, pure and simple. But classification of what? What is the nature of a cost? Is it a concept; is it a calculation, or is it a kind of event which occurs in economic life? I am inclined to think that a realistic economics (empirical) must deal only with objective events—acts and relations. If this is the nature of a cost, then, for the purpose of classification, a criterion must be agreed upon according to which there is to be selected from all economic events those which are to be classified as costs; for the classification does not exist in nature. The criterion is a matter of choice—of scientific utility—and there is no 'right' and 'wrong' about it."[6]

Most of our accounting definitions of cost have followed a more simple approach. A special committtee on terminology of the Institute in 1931 stated that cost "is simply the expenditure of money or services or their equivalent"; and Accounting Research Bulletin No. 24 defines cost as "the price paid or consideration given to acquire the asset in question." While these are satisfactory general definitions they obviously leave wide areas for the exercise of judgment in the determination of all of the various elements of cost which often enter into the acquisition or construction of extensive fixed assets.

The cost of labor, materials and expense which enter into the construction of fixed assets may be classified into direct costs and indirect or overhead costs. While the ascertainment of direct costs presents comparatively little difficulty, the determination of the amount of indirect or overhead costs to be included in the fixed asset accounts involves to a greater degree the exercise of judgment. Broadly speaking, two different principles of determination of overhead costs have been used which may be called the incremental method and the allocation method. The incremental principle, upon which overhead expenses

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[6] C. Reinold Noyes, "Certain Problems in the Study of Costs," *American Economic Review*, September, 1941, pp. 473–474.

are charged to property account only to the extent to which they would not have been incurred had construction not been in progress, has been used widely by industrial enterprise because construction work is not usually a major continuous factor and is quite often performed by outside engineers and contractors. The allocation principle, upon which overhead costs are apportioned between property and operating accounts as nearly as possible in proportion to the service rendered, has been used more generally in the utility field. The allocation method has been more suitable in the case of utilities because the extension and replacement of properties is a continuous major function and also the development of the regulatory process makes it necessary to have a more precise determination of the costs of fixed assets.

It is manifest that when only operation or only construction, is in progress the two methods give the same result, but that when construction and operation are both being carried out under circumstances in which operation constitutes the major activity, the incremental method results in lower charges to property account than the allocation method.

A fairly comprehensive statement of the components of the construction cost is contained in the Uniform System of Accounts for electric utilities prescribed by the Federal Power Commission. Without quoting all of the detailed comments, the following topic headings indicate the general nature of the components:

(a) Contract work
(b) Labor
(c) Materials and supplies
(d) Transportation
(e) Special machine service
(f) Shop service
(g) Protection
(h) Injuries and damages
(i) Privileges and permits
(j) Rents
(k) Engineering and supervision
(l) General administration capitalized
(m) Engineering service
(n) Insurance
(o) Law expenditures
(p) Taxes
(q) Interest during construction
(r) Earnings and expenses during construction

A further indication of the extent to which itemization of cost may be carried is shown under "Items of cost applying to buildings" in the Uniform System of Accounts which shows 52 separate numbered items extending from No. 1, "Architect's plans" to No. 52, "Yard surfacing, gravel, concrete or oil."

CLOSE RELATIONSHIP BETWEEN INTANGIBLE AND TANGIBLE FIXED ASSETS

The fixed assets of a business enterprise consist of a combination of invisible factors such as development cost, going concern, patents and process values and visible implements of production and distribution such as land, structures and equipment which in the hands of a competent personnel organization may be utilized to conduct a successful business operation. The different types of intangible and tangible assets mentioned are merely illustrative and should not be considered as an all-inclusive list. A great deal of fallacious thinking has stemmed from an over-emphasis of a "brick and mortar" viewpoint. A careful analysis of the modern concept of fixed assets devoted to business purposes will indicate that there is little basic economic distinction between so-called tangible and intangible properties, the values of both being practically entirely dependent upon earning power, In this connection I should like to quote to you the brief statement from Professor John R. Commons:

> "The invisible capital of many a going concern is more valuable than all of its machinery, lands, buildings, stock on hand, and, indeed, if that invisible capital loses its value all of the visible capital is likely to sink at once to the value of old iron and scrap. It would not be in-

correct to say that all capital is invisible value, in that it is the present value, not of physical things, but of the hopes of the future aroused through confidence in the now invisible but expected transactions of the future.

"For, what is the value of lands, buildings, machinery, commodities, but the value of their expected 'uses'? And what are their uses but the uses not yet made but yet to be made of them, either in using them directly or in selling their products for money or other products? One is use-value, the relation of man to nature. The other is exchange value, the relation of man to man. Both of them lie in the future but have a value in the present. We may call them Expectancies. All value is expectancy. Use-value is the expected behavior of things in man's activity of production and consumption. Exchange-value is the expected behavior of people in buying and selling, lending, hiring, borrowing and paying debts."[7]

The practical problem of dealing with the distribution of investment cost between tangible and intangible fixed assets is most commonly encountered in a lump sum purchase of an operating business enterprise. In accounting for such a purchase, it is necessary, first, to know the total cost of the acquisition, after providing for any liabilities assumed, and second, to make an appropriate allocation of such total cost to the various assets. Each of these matters involves several points of accounting principle and criteria.

The total cost of acquisition should be the total cash paid plus the cash value of non-cash assets transferred or securities issued or liabilities assumed by the purchaser. In determining the cash value of non-cash elements of consideration it is acceptable to determine the fair value of the consideration given or of the properties acquired, whichever is the more clearly evident. The total purchase price is presumed to coincide with value at the date of acquisition and, obviously, represents a capital investment expenditure to the new owner.

Having determined the total cost of acquisition, it becomes necessary to deal with the allocation thereof to the various classes of assets. In this connection it should be stated that purchases and sales of going enterprises, in practically all instances, are closed by negotiation of an over-all consideration for the entire enterprise rather than negotiation of separate prices for the various classes of assets embraced in the enterprise. The assets embraced in the enterprise ordinarily consist of the following:

Current assets
Prepaid items and charges applicable to future operations
Fixed assets:
  Tangible—Buildings, equipment, etc.
    Land
  Intangible—
    Limited term items such as patents, copyrights, franchises, etc.
    Unlimited term items such as trademarks, organization costs, integration costs, going concern value, goodwill, etc.

In dealing with the segregation of investment it is well to bear in mind that the present value of all business enterprises is based primarily on the expectation of future earnings. This is generally admitted by all authorities, including regulatory commissions and courts. Such expectation of earnings is itself of an intangible nature. Intangibles are really the substantive elements of business values and the segregation of the investment for accounting purposes is no reflection on the genuineness of the intangible assets. It is customary, however, to make an accounting segregation of the total investment even though such segregation may be somewhat arbitrary. The reasons for the segregation of the total investment are, first, in order to maintain a conventional accounting record of the funds invested in the respective classes of assets at date of acquisition and, second, in order to provide a basis for depreciating or amortizing the cost of the

[7] "Legal Foundation of Capitalism," 1924, pp. 24–25.

items having definite or estimated limited term periods of usefulness.

In most instances, the portion of the total consideration assignable to current assets and prepaid items is readily ascertainable and should represent the fair value of such items at the date of purchase. The part of the total cost to be allocated to tangible fixed assets and to limited term intangibles, while often more difficult to ascertain, should likewise represent the reasonable value thereof. The remainder, if any, of the total purchase cost, after deduction of the portions assignable to current assets, prepaid items, tangible fixed assets and limited term intangible fixed assets, is considered to represent the cost of unlimited term intangible fixed assets. This treatment of the remainder is entirely consistent with the previously stated purposes of the allocation. In making the foregoing allocations of total investment, current price levels and condition of the properties and the reasonable judgment of the new owner should be given predominant weight. Cost or book values to previous owners are not significant unless they happen to coincide with and represent the best evidence of the reasonable value to the new owner.

INTANGIBLE FIXED ASSETS AND THEIR AMORTIZATION[8]

The generally accepted accounting principles which should be followed in accounting subsequently for the investment in intangibles makes it necessary to distinguish between the two major classes of intangibles, namely:

Type a—Those having limited terms of existence, and

Type b—Those having unlimited terms of existence.

The generally accepted accounting principles for dealing with intangibles are well stated in Accounting Research Bulletin No. 24 issued by the Committee on Accounting Procedure of the American Institute of Accountants in December 1944. The bulletin makes it clear that type (a) intangibles should be amortized by systematic charges in the income statement over the period benefited, as in the case of other assets having a limited period of usefulness, and that type (b) intangibles may be carried continuously unless and until it becomes reasonably evident that the term of existence of such intangibles has become limited, or that they have become worthless. The bulletin states, "In determining whether an investment in type (b) intangibles has become, or is likely to become worthless, it is proper to take into account any new and related elements of intangible value, acquired or developed, which have replaced or become merged with such intangibles." The bulletin also states, "Where a corporation decides that a type (b) intangible may not continue to have value during the entire life of the enterprise, it may amortize the cost of such intangible despite the fact that there are no present indications of such limited life which would require reclassification as type (a), and despite the fact that expenditures are being made to maintain its value. In such cases the cost may be amortized over a reasonable period of time, by systematic charges in the income statement. The procedure should be formally approved, preferably by action of the stockholders, and the facts should be fully disclosed in the financial statements. Such amortization is within the discretion of the corporation and is not to be regarded as obligatory."

As brought out in a previous section of this paper, the Federal regulatory commissions through their administration of uniform systems of accounts have made it mandatory for the utilities to write off

[8] Intangible development costs of the oil and gas industries and the general subject of depletion are not dealt with in this paper.

or amortize below the net earnings line all investment in excess of "original cost." The investments written off naturally include substantial costs of unlimited term intangibles, such as costs of integration of the present enterprises, etc. Many industrial companies have voluntarily written down unlimited term intangibles to nominal amounts, and there has been considerable advocacy for mandatory amortization of these costs by some of the staff of the Securities and Exchange Commission.

These developments raise a question as to the soundness of even a voluntary write-off of unlimited term intangibles. It seems to me that it is of economic as well as of accounting significance to maintain the identity of the capital devoted to the enterprise in order that it may be related to the operating results. Earnings and so-called "net worth" ratios are computed by many economists, security analysts and others and the "net worth" is materially understated because of the arbitrary write-off of intangibles. The only accounting justification that I can see for amortization of cost of organization, integration, going concern, goodwill and other unlimited term intangibles would be where the circumstances are such that a part of the cost thereof is applicable to the operations for the period.

If it is the policy of an industrial enterprise to force an early realization of the goodwill or other intangibles purchased by methods such as cheapening the products or services, or discontinuing advertising and other appropriate maintenance expenditures, it is clear that the investment in intangibles should be amortized by charges to income over the estimated period of realization. On the other hand, if the policy of the owner is to maintain fully the intangible investments by high quality products or services and by continued advertising and other maintenance expenditures, the investment should not be amortized or written off unless and until there is permanent impairment in earning power.

It is claimed by those who advocate amortization of all intangibles that, even though the investment in unlimited term intangibles is fully maintained by current expenditures, the capital investment is depleted and should be charged off. This argument is wholly fallacious. It is comparable to saying that the first cost of tangible properties replaced through maintenance should also be charged to expense at the time of replacement, which would clearly result in an unwarranted understatement of cost of fixed assets and a corresponding overstatement of operating expenses. Similarly, the charging off of unlimited term intangibles, such as goodwill, integration costs, etc., which are being fully maintained, would result in an understatement of cost of fixed assets and an overstatement of expenses. This would be true even though it might be demonstrated in an unusual case that the original intangibles had ceased to exist and had been replaced by new values attributable to the subsequent expenditures which were charged to costs of operations. Under such circumstances, it could not fairly be claimed that the original investment should be charged off without at the same time admitting the reasonableness of capitalizing an equivalent amount of the subsequent expenditures, which would constitute a meaningless and senseless accounting procedure.

It is also claimed that the cost of intangibles should in some manner be related to the tangible properties acquired and should be written off when the tangible properties acquired have ceased to exist. Obviously, the unlimited term intangible investment costs have nothing to do with specific units of physical plant which are replaced in a piece-meal fashion from time

to time without any ill effects upon the business of the enterprise. Such intangible costs are clearly related to the total economic value of the enterprise, which means its ability and expectancy, under normal conditions, to produce more than a minimum return on the cost of the bare bones of physical plant and working capital.

The advocates of amortization of unlimited term intangibles sometimes advance the broader premise that, even if the life of such items is admitted to be practically coterm nous with the life of the enterprise, an amortization program should be undertaken because all enterprises will end sometime. If this is a valid justification for amortization of intangibles, it applies with equal force to all other capital losses on tangible fixed assets, including land, and current assets, which would undoubtedly be incurred upon a forced termination of the enterprise. In this connection, a factor which is quite often overlooked is that neither straight-line nor any other customary method of depreciation provides for the hazard that the enterprise may end. Accounting is based upon the concept of a going concern and I see no justification for changing this concept. Certainly there would be grave doubt as to the wisdom of changing it for certain business assets and not others. From a broader viewpoint, it would seem to be inequitable to understate the earnings of one generation of investors to provide for a capital loss which has not yet occurred and which may not occur for many generations.

TANGIBLE FIXED ASSETS AND THEIR AMORTIZATION

In a preceding section it has been indicated that the distinction between tangible and intangible fixed assets is quite often made by arbitrary processes. It is likewise true that there is no natural distinction between capital charges and income charges and any line that is drawn must be an arbitrary one. Many text books indicate that the distinction should be determined largely on the basis of time. If an expenditure will produce a benefit for a short time it is treated as a charge to income. If it is expected to yield a benefit for a long time it is charged to capital. Presumably the decision of whether short or long should be made in relation to the customary accounting period of one year.

While the time factor of periodic accounting makes it necessary to deal with tangible fixed assets on an amortization basis, I doubt very much that a period of usefulness is a practical guide in the distribution of expenditures between capital and operating charges. This is illustrated by the fact that a coating of paint is expected to last under usual conditions considerably more than one year and repainting, of course, is one of the most common examples of a maintenance charge. Accordingly, it is my belief that the distinction between tangible fixed assets and expenses should be made by the selection of a list of physical property units which are to be treated as capital items.

Tangible fixed assets may be viewed broadly in relation to separate plants or they may be viewed more narrowly in relation to individual units of property which make up the plants. Under the first viewpoint all replacements of property units, less than the entire plant, would be charged to maintenance as incurred, whereas under the second viewpoint such replacements would be treated as plant additions and the original cost of the units would be retired. Obviously the two viewpoints would cause wide variances in the monetary carrying value of the fixed assets, in maintenance expenses and in depreciation provisions and reserve. These variances are of greater significance when current price levels are greatly out of line with those prevailing at date of acquisition

or construction because maintenance expense is based on present costs whereas depreciation, under present practices, reflects past costs.

The establishment of standardized lists of property units has been widely adopted in the public utility industry but is not as widely used in commercial and manufacturing industries as is desirable. As a result the distinction between fixed assets and maintenance charges varies a great deal not only between companies but as between divisions and periods of time in the same company. There is also a need for considerable improvement in the detail property records in many companies. Such records should be designed so that they may be checked and brought into agreement with the properties actually on hand and in use at reasonable intervals, say every five years, and they should be controlled by the fixed asset accounts kept in the general ledger.

It is now generally recognized that the investment in, or other significant basis of accountability for depreciable tangible fixed assets should be provided for by some reasonable and systematic method of depreciation over the estimated lives of the assets. Maintenance and operating policies and the decisions of management will, of course, have a material effect upon the estimated lives and may cause them to vary from time to time.

During 1943 and 1944, very great strides were made in the clarification of the meaning of depreciation accounting through the interchange of views between the Committee on Depreciation of the National Association of Railroad and Utilities Commissioners and the Committee on Accounting Procedure of the American Institute of Accountants. The Institute committee pointed out in a letter dated January 28, 1944 that the N.A.R.U.C. committee's definition and report on depreciation used the term in three different senses, viz.: (a) to describe a decline in value from any cause whatever, (b) to describe a decline in value attributable to partial exhaustion of useful life and (c) to describe a systematic amortization of cost (or other basic value) over useful life without regard to value during that life. The Institute committee developed its own definition in relation to the third sense or allocation concept as follows:

> "Depreciation accounting is a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation. Depreciation for the year is the portion of the total charge under such a system that is allocated to the year. Although the allocation may properly take into account occurrences during the year, it is not intended to be a measurement of the effect of all such occurrences."[9]

It should be observed that, by the terms of the definition itself, accounting depreciation provisions are not intended to be a measure of physical depreciation. On the other hand, they should be predicated on a logical and rational system of charging to expenses of operations the cost or other basic value of depreciable fixed assets over the estimated useful lives of such assets. The allocation of capital charges over a period of years contemplated by this definition does not involve valuation in any sense of that term. The accountant does not seek to value or appraise either the asset itself or the physical depreciation existing or accrued at any time in the course of the useful life of the asset.

While there is general agreement on the requirement for depreciation accounting, there are, of course, a great variety of methods employed; for example, straight-line, production (user), sinking fund (annuity), diminishing balance. All of the

[9] Accounting Research Bulletin No. 20 (as modified by 22).

methods contemplate the same end result, but during the process the annual provision and accumulated reserve will vary greatly depending upon the method used. For instance, the provision during the first year of use of property having an estimated life of fifty years and no salvage value, would amount to only .34 of 1 per cent of the investment under a 6 per cent sinking-fund computation, 2 per cent under the straight-line method and 7½ per cent under the diminishing balance method.

Undoubtedly the straight-line method is more commonly used in the United States than any other method. There is a trend toward the wider use of the production method, particularly in manufacturing industries, which I believe should be encouraged. The principal advantage of a production method over the straight-line method is that it results more nearly in a rateable charge for exhaustion of the capital assets in relation to units of service or units of product rather than in relation to the mere passage of time. Business enterprises exist for dynamic purposes of furnishing services or of creating products and it seems to me far more logical to relate the charges for exhaustion of capital assets to these functions instead of relating them to calendar months or calendar years. The production method results in the allocation of a higher depreciation charge in periods of maximum business activity and in relatively lower charges in periods of low activity. Therefore, the method has the desirable effect of leveling out somewhat the heights of earnings reported in periods of business booms and likewise of alleviating the burden of fixed charges in periods of depression.

OBJECTIVES OF FIXED ASSET ACCOUNTING

Inasmuch as fixed assets are one of the main categories in which significant expenditures are made in one period for the benefit of operations in future periods, the objectives of fixed asset accounting must be judged in relation to the general purposes of periodic financial accounting. While time will not permit a detailed statement of the purposes of accounting, the following brief summary will serve as a basis for this discussion:

1. Maintenance of accounting control over assets, liabilities, revenues and expenses. This includes the broad problem of organizational plan and division of duties among personnel to guard against irregularities and falsification of accounts. It also embraces design and installation of accounting procedures and the provision of effective internal auditing.

2. Supplying information required by officers and directors for the operating and financial management of the business. Effective executive administration requires the establishment of planned yardsticks or standards and the measurement and reporting of performance as a basis for the prompt initiation of any required corrective administrative action. These purposes are accomplished by fixed or variable budgets and operating and financial reports, which are designed to meet all of management's requirements and may involve cost and profit determinations by territories, by plants, by departments, by products and units of products.

3. Accounting and reporting to investors and creditors on stewardship responsibilities, which includes interim and annual reports to stockholders, and interim and annual reports required to be filed with the Securities and Exchange Commission.

4. Supplying information required by management and by governmental bodies for ratemaking and other regulatory purposes. This function, of course, has been for many years of primary importance to public utilities. With the extension of government regulation and influence over all business, particularly during the war,

this function embraced such matters as costing of production under war contracts, renegotiation, price-fixing, and settlement of terminated contracts.

5. Supplying information required by management and by governmental bodies for all tax purposes, including property, excise, franchise and income taxes. Of these, income taxes have created the greatest demands upon accounting due to the extremely high personal and corporate tax rates in combination with the inexcusably complex determination of taxable income based upon pyramided revenue acts and related regulations and decisions.

6. Supplying the financial and accounting information required for obtaining new or additional capital. In case of public offerings, the registration requirements of the Securities and Exchange Commission under the Securities Act must be met.

7. Supplying information regarding financial position, results of operations and other facts and statistics of business enterprises which are used by the government as a basis for decisions on economic policies.

8. Supplying information of the character mentioned in the preceding point which is used by labor organizations as a basis for decisions on wage policies.

The past two decades have witnessed a tremendous increase in the economic power exercised by government. This, of course, is a part of the world-wide conflict to determine whether an idealogy of statism or one of individualism shall pervail, or how far one system may be safely blended with the other. During this period the political and economic power of labor has been greatly increased. This trend has been described by Sumner H. Slichter as follows:

> "For some time the United States has been changing from a capitalistic to a laboristic society. By this I mean that employees and their representatives are coming to replace businessmen as the most important single influence in the community. Today over 3 out of 4 persons who work for a living in the United States are employees, and about 15 million of these employees are members of trade unions. A community made up almost entirely of employees is bound to have a culture which differs in important respects from the culture of a society in which the self-employed and the property owners have the principal influence. These differences will manifest themselves in value judgments, in views of policies, in mores, in social institutions.
>
> "A laboristic community must be expected to re-examine the value judgments reached when property owners were the dominant influence in the country. No area of capitalistic thought is likely to be examined more thoroughly and critically than that pertaining to profits. The laboristic society will wish to review how profits are made, what purposes they serve, how efficiently they perform these purposes, how they affect the operation of the economy, how they are used, and how they should be used. In particular, it will wish to make up its own mind as to what constitutes excessive profits."[10]

If Professor Slichter's analysis is valid, which I believe it to be, the maintenance of our private enterprise economic system may well depend upon our ability to furnish labor with the information which will lead to sound economic conclusions.[11] Certainly it has been amply demonstrated that labor's viewpoint is apt to be promptly reflected in government policies. Most of our accounting conventions and postulates were developed from the viewpoint of the older purposes of accounting, such as stewardship reporting to investors.

[10] "Profits in a Laboristic Society," *Harvard Business Review*, May, 1949, p. 346.

[11] The temperate attitude expressed by the American Federation of Labor in its official Monthly Survey for May–June is encouraging to this objective. The survey states:

> "In the present precarious business situation, wise union policies are of utmost importance in negotiating with your employer. Get the facts on his financial condition and outlook from him if possible, supplement your information by writing AFL headquarters.
>
> "Perhaps your employer's prospects are excellent; but if his profit margin is being squeezed by price declines your future will be more secure if you help him improve his competitive position. A wage increase may depend on a plan for union cooperation to prevent waste, save expenses, cut costs, improve production."

While there might be some grounds for adherence to historical cost accounting for fixed assets if only the older purposes were to be considered, it is clear that this basis of accounting cannot serve the vital newer purposes of supplying proper information to government and labor.

The aggregate reported corporate profits in the United States were $12.8 billions for 1946, $18.1 billions for 1947 and $19.7 billions for 1948. Professor Slichter has estimated that in order to state operating expenses on a current dollar cost basis, downward adjustments of $7 billions in 1946 and 1947 and $5 billions in 1948 would have to be made in the reported corporated profits.[12] These adjustments for the estimated rise in cost of replacing inventories, plant and equipment aggregate from 25 per cent to more than 50 per cent of the reported profits.[13] Can a method of measurement of periodic income be considered rational when it results in presenting income 50 per cent greater than economic income for the entire industry of the country? Will the application of such a method in itself disturb the equitable division of the fruits of production between the interested parties? Of even greater importance, will the continuance of the method bring increased risks to the maintenance of an adequate productive plant capacity which is so essential to the comfort, economic strength and security of all of us?

Time will not permit a detailed discussion of these questions. However, it seems to me that the answers are inescapable. I would not propose at the present stage of development that provision for plant exhaustion on a current price level be made a mandatory accounting practice. On the other hand, I believe that we will seriously default in our professional responsibilities if we do not recognize the practice as worthy of inclusion in the realm of acceptability, provided that the estimates are objectively determined and that the method is to be consistently followed. The principle involved is no different than "Lifo" and base-stock inventory methods which have been approved as accepted accounting practice.

Accounting has had its greatest development in countries identified with systems of free enterprise economy and responsive parliamentary government. These systems have likewise produced higher standards of living for a greater proportion of the citizens than any other system. One of the most aggravating phenomena in our economic history has been the recurrence of business cycles. It would seem clear that one of our basic responsibilities is to develop a philosophy and practice of accounting which will be helpful to the successful operation of our free enterprise system. The first-in first-out method of charging operations for the cost of short-term inventories and for the allocations of longer term plant and equipment has greatly added to the height of the "booms" and to the depth of the "busts." It seems to me high time that we gave our acceptance to methods which will avoid these distortions of reported business income by expressing costs and revenues in terms of dollars having the same purchasing power.

While the substantial decrease in the purchasing power of the dollar is undoubtedly the most important problem to be solved in fixed asset accounting, there are several other phases which need remedial treatment. It was pointed out in a

[12] *Harvard Business Review*, May, 1949, p. 351.

[13] The following specific studies for the steel, oil and public utility industries, which have large fixed capital requirements, show even greater disparities between reported income and economic income.

R. C. Jones, "The Effect of Inflation on Capital Profits: The Record of Nine Steel Companies," *Journal of Accountancy*, January, 1949.

Joseph E. Pogue and Frederick G. Coqueron, "Financial Analysis of Thirty Oil Companies for 1947," Chase National Bank.

Paul Grady, "The Impact of Replacement Costs Upon Public Utilities," Controllers Institute (pamphlet) 1948.

previous section that many companies have arbitrarily written down investments in intangible assets the value of which is more or less coterminous with the life of the enterprise. Such understatements of invested capital play into the hands of those who are inclined to minimize the participation of investors in the earnings of industry. Furthermore, I am convinced that the tangible productive plant accounts of industry are substantially understated because of ultra conservatism in the determination of costs of the assets and in the determination of past provisions for depreciation. If we wish to present information which will serve the purposes of all parties interested in the earnings of corporations, the following program of accounting for fixed assets is suggested:

1. Reinstate in the accounts, or in notes thereto, all costs of unlimited term intangibles, if the current values are at least equal to cost. In this way information will be given as to the approximate capital invested in the enterprise.

2. The gross amount of tangible fixed asset accounts should be brought into line with the actual cost of the assets on hand and in use. This may include reinstatement of fully depreciated plant, still in use, recognition of physical retirements not previously recorded and corrections, up or down, of items of cost improperly distributed in the accounts. After the establishment of the proper investment account, detailed property records should be maintained and checked at reasonable intervals with physical property in use. The fixed asset dollar investments should be aged in order that current dollar equivalents may be computed. Such current dollar costs should be shown in the face of the balance sheet, as significant explanatory information, or in notes to the financial statements.

3. Where the depreciation reserve is materially out of line with reasonable requirements in relation to the age and life of the properties, make appropriate adjustments to the reserve by charging or crediting surplus.

4. Make regular provisions for amortization of depreciable tangible fixed assets covering (a) the historical cost and (b) the excess of current dollar costs over the historical cost. The two elements of the provision should be shown separately in the income statement. The second element of the provision should be credited to a "capital reserve for increase in replacement costs." This capital reserve would remain intact until such time as the current costs of tangible fixed assets become less than the historical costs of the properties in use. In these circumstances, the income statement would show a credit which would be charged to the capital reserve.

5. Study the condition of depreciable properties, say, every five years in order to revise the annual amortization, if necessary, in the light of the current estimate of remaining useful lives of the properties.

6. If the business enterprise is subject to important variations in volume of business, consider the advantages of adopting a production method of amortization.

It is recognized that the foregoing program does not make up any of the deficiency in past amortization provisions in relation to current replacement costs. This capital deficiency, as I view it, could not be charged to income of future periods by industry generally without losing the key objective of stating revenues and expenses in terms of the same dollar. If the inflationary spiral were to continue indefinitely we probably should make provision for the increasing deficiency in order to prevent an unrecorded erosion of capital. However, if we may assume that inflation has been arrested, it seems preferable to regard the deficiency in past amortization as a pending capital requirement to be financed through retention of earnings or by new capital issues.

One of the most serious aspects of the disparity between the historical cost of fixed assets and the current replacement cost is that depreciation allowances for income tax purposes under present laws must be based on historical cost. Since high personal tax rates and the one-sided taxation of capital gains have depleted the flow of new equity capital from investors, the principal present source of capital for American industry is earnings retained in the business. This means that each $100 of increased cost of replacements of fixed assets, financed out of retained earnings, requires $160 of reported earnings before federal income taxes.

The principal difference between our country and those parts of the world which do not have a satisfactory standard of living, is the extent to which we have harnessed machinery to increase the output of goods per man hour worked and to improve the quality and usefulness of the products. It has been estimated[14] that a century ago in the United States 22% of the physical work was performed by man, 51% by animals and 27% by mechanical devices; whereas, in 1948 man performed only 4% of the physical work, animals 2% and all of the remainder—94%—was performed by the machinery which makes up our productive capital. The overstatement of earnings and overpayment of taxes due to amortization of the historical cost of fixed assets and to first-in first-out inventory methods will almost certainly result in an erosion of our productive capital. For this reason, I sincerely hope that the accounting profession will have the courage to renounce the invalidated postulate of a fixed monetary unit and will strive to attain a measurement of periodic earnings by stating all costs and expenses in terms of the current dollar.

[14] *The Economist*, July 2, 1949.

CONSTRUCTION OF OBJECTIVE EXAMINATIONS*

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THE FACT THAT we have organized this morning's session on several aspects of the pedagogy of accounting implies that there is room for improvement in our present curricula and methods. My own contention is that if you have any extra energy to spend, you will find that the greatest return for your investment will be found in the improvement of your examinations. I wish to argue further that the greatest opportunity for improvement lies in the direction of a strong trend toward greater objectivity in those examinations.

I use this expression "trend toward greater objectivity" advisedly though I have been billed to discuss "the preparation of objective examinations." It is of greatest importance to realize that there is a full scale of possibilities in examination techniques running from the *highly subjective* to the *perfectly objective*. This is in contrast to the assumption often encountered that the choice is between traditional style subjective examinations and the full stream-lined objective types already used in some quarters.

The simple truth is of course that in the field of accounting, as contrasted to many other areas, our examinations have always been far along on this scale of objectivity. Accounting, like mathematics, lends itself naturally and easily to the objective technique. Thus the question before us in accounting is not: "Shall we abandon subjective in favor of objective examination techniques?" but rather, "Shall we take even fuller advantage of objective techniques of examination to which accounting lends itself so readily?"

In specific instances you may wish to face the question in its ultimate form: "Shall we go the whole way, set up this examination in 100% objective form, and arrange it for machine grading?"

The first of these questions, the movement toward greater objectivity, is the one of deeper pedagogical significance. The second, the full objective form, is one of specific techniques.

The method of attack on these questions must, of course, be a balancing of advantages against disadvantages. Let us get a few of the easier points out of the way.

In the first place it must be clear that we may and usually do have two purposes in mind in giving a particular examination. The obvious, direct purpose, to find out who passes, who fails, how the individuals in the class rank, who gets the A's, the B's, the C's, and so forth. This is the *grading* function of the examination. The other function is that of an aid to pedagogy. This aid to pedagogy has several aspects. There is no doubt that the examination is an incentive device, that it points up the importance of specific subject matter areas, that it assures greater subsequent retention of the materials stressed therein, that it measures the effectiveness of teaching area by area and guides subsequent teaching effort, and that it provides a spur to really attentive reconsideration which may be necessary after the examination. However, the CPA examination, the CSP examinations, and in most of your final course examinations, the *grading* function

* This paper was presented at the annual meeting of the American Accounting Association, Ann Arbor, September 9, 1949.

is and must be the paramount consideration. The argument for the objective technique is usually based upon the ease and sureness with which it serves this *grading* function and I want to keep this function primarily in mind in this discussion. It is, however, by no means conceded that the objective technique is valueless from the pedagogic point of view.

Frequently one hears the objection that the objective examination is bad in that it fails to give the examinee practice in organizing his thoughts in good English. I grant you fully that our students typically need a great deal of additional training in both spoken and written English, but I do not believe that the accounting examination is the proper occasion for taking up a responsibility which has been neglected during all the rest of a student's training. On occasion it may be desirable specifically to test an examinee's ability to write. Just what would be a good, gradable, test of writing ability I do not know but I am quite sure that the two kinds of testing jobs would not mix well.

On the practical, mechanical aspects of setting up and grading objective tests, several things need to be said. First, let me acknowledge that it is harder and more time-consuming to set up a good objective examination than any of the traditional varieties. For a small group of students this lost time cannot be made up in grading time saved. For a large group the saving in grading time may balance the make-up time. This is especially true when you realize that the grading time we are talking about for the objective examination may just as well be the time of a secretary or student grader as the time of the professor. I feel sure that my graders can do at least as accurate a job of grading my objective tests as I can do myself. If the group to be examined is big enough to merit machine grading there is, of course, no comparison in grading speed.

Many early efforts at objective examining run into student resistance. Such resistance is often at least partially justified because most early attempts in the new medium are likely to include a few pretty sour items, and students, especially the best ones, are quick to spot such ambiguous, unanswerable items. The cure for this is item-analysis of the results of every test. Not only does such an analysis permit the culling out of bad items in subsequent runs, but it soon teaches the examination maker what the pitfalls are, and improves his subsequent efforts greatly. After an examination I usually take the students into my confidence and tell them which items show up poorly on the item-analysis. They rather enjoy my confession, especially since they usually have spotted the poor items themselves. This robs the potentially dangerous situation of its sting, and the students are satisfied that the few bad items do not seriously affect the reliability of the whole test.

All of these simpler pros and cons, however, are of no real consequence compared to the one heavy argument frequently voiced against the objective technique. It is the only argument which has ever had me worried and I want to make it my chief concern this morning because I know it has to be answered if you are ever to take these examinations seriously in the field of accounting. The fundamental condemnatory judgment to which I refer may be stated something like this: "Objective examinations may be all right for certain mechanical, memory details *but they can never test a man's real analytical or organizing ability.*"

It is important to have before us a fair statement of this principal objection. I want it well stated because I want to "take it head-on, "though I realize that a 30 minute paper is a pretty small arena in which to fight with a big tough bull like this one.

To answer this criticism requires a really careful look into the psychology of the examining situation. When we dig into this concept of "real analytical or organizing ability" which we all would like to test, we get into something which itself deserves a lot more analysis than the lip-service approval that it usually gets. We have certainly the right and duty to ask just what the thing *is* and whether *any* form of examination can really test the possession of so complicated an ability. I feel quite safe in raising the suspicion that some of our traditional forms of examinations fail really to test this fundamental analytical or organizing ability. The discussion or essay type question places such a premium on rhetorical facility that it is difficult indeed for any grader to find real evidence of this more fundamental trait he is looking for. Even the big, so-called practical problems in consolidation, installment sales, statement of affairs, cost accounting or what have you, do not automatically reveal possession of analytical and organizational ability. If you are really honest about these problems you must acknowledge that a smooth-working memory of the typical forms into which such problems may be cast, goes a long way toward the acceptable solution.

I make these observations, not merely for the fun of taking a slap at the traditional examination forms, but to call attention to the need for a critical definition of this analytical and organizational ability which we all assert is so fundamental.

It might appear that an accounting professor is on dangerous ground when he tries to rush his audience of accountants into a realm where professional psychologists might fear to tread. I am sure that it would be unwise for us to worry about which lobe or crease of our cranial equipment does this job of analyzing and organizing, but on the other hand we teachers have to be applied psychologists, and I think we are fully capable of examining a little more closely into the mechanics of this supposedly complicated analyzing-organizing task. Unless we do this we are in the questionable position of attempting to test something which we have not even defined. Fortunately, when we come to grips with this proposition, we find that the trait we all value so highly is not really difficult to define at all.

Let me take a stab at such a definition: *The ability to analyze and organize is basically the ability to recognize and appraise significant relationships among insolated factors each of which is by itself a simple statement of fact.*

Read that again because it is important. If I am not substantially right on this definition, the rest of my argument will fall flat.

Whether these separate facts present themselves in an actual professional engagement, in a 10-page single-spaced Harvard Business School case, or in some professor's diabolically conceived final examination problem, the situation is fundamentally the same. Twenty-five, fifty or a hundred specific factors, more or less clearly stated are before us. Many of the factors are of no significance, others vary from barely consequential to determining. There may be one or several questions or issues at stake. The task of the practitioner on one hand, and of the examinee on the other, is to recognize and appraise the significant relationships in terms of their impact on the issue or issues to be decided.

It is important to look at this matter of recognition and appraisal of factors even more closely. It may be broken into three distinct phases. With respect to each factor there must be three decisions: (1) is this factor consequential to the issue?; (2) if consequential, in which direction does this factor pull?; (3) how strong, with respect to all other factors, is the pull of this factor?

If the practitioner or examinee can answer these three questions correctly with respect to each factor before him he will come to the correct solution of his problem whether it be a recommendation to management on a matter of high policy, a complicated set-up problem with many issues and sub-issues, or a matter of the correct entry to make for some new transaction.

By and large we have handled the simpler situations, with few factors, quite effectively, in our examinations. The organization problem is these cases has been so simple as to be hardly recognized as such. It is clearly the complicated many-factored problems, resembling the realistic conditions of actual business, that give us a chance to test the real brain power we are looking for.

But when we get into these many-factored situations where the organization problem becomes paramount we are faced with a really difficult task in attempting to frame an examination that will examine. Let us assume a situation in which we can isolate 50 factors of which 35 are inconsequential and 15 of at least some consequence, having varying directional and quantitative pulls. How can we convert this situation into an examination that will examine?

Whether our 50 factors are in the form of a figure problem, a lot of descriptive words or a combination thereof, the traditional technique gives the examinee a free hand and leaves the grading problem in a highly subjective form. I am quite sure you will all agree that in any complicated practical problem we should not base our appraisal of the examinee's effort upon his final "yes" or "no" decision, but that we must inspect the reasoning by which he comes to his solution. This is nothing more nor less than saying that we must inspect the way in which he appraises the many factors in the problem.

Very few students can, in the limited time available, even approximate a full solution, identifying *all* the consequential factors and appraising the directional and quantitative pull of each. You all know what you are likely to find. One student will do a good job in sorting out most of the consequential factors and perhaps hint at their directional pull. Another isolates only two or three factors but does a fine job of appraising the direction and strength of their influence. Still another obviously misinterprets a phrase or two which vitally alters for him the statement of several factors, but this examinee does a really superb job of analyzing the situation that he then sees in the problem. Given more time and the realism of an actual background anyone of these three examinees might come up with the correct solution. The grader, facing the problem of evaluating the three examinations, must indeed have crystal-ball powers to say to what degree each examinee possesses the power of analysis and organization. It does no good to say that all three of the described solutions have merit and should be passed, because we may have not three, but three hundred or three thousand students writing this examination and the school rules require an A B C grading, or perhaps this is the CPA exam and we have passing requirements of serious legal and policy consequences. You have all been in the difficult position of the grader I have described. It is the typical subjective judgment dilemma in any examination of a realistic degree of complication.

Our earlier three phase analysis of the significance of factors provides the fundamental clue to the technique of making objective examination out of the situation described. Theoretically we can ask of each of the 50 factors: (1) whether it is consequential or not; (2) whether it pulls up or down; and (3) as between opposed factors, which pulls the harder. This is the

story if there is only one issue. With multiple issues or sub-issues the possibilities are greatly multiplied. In practical examination construction it would seldom be wise to attempt a problem of such an exhaustive pattern, because many of the possible questions would be too obvious, and some might be so difficult that even the examining professors could not agree on the answer. *Selection* is the key to practical problem construction against this theoretic background. Of the almost infinite number of specific questions that could be set up, the trick is to select those that are: (a) important; (b) of sufficient difficulty for the group to be examined; (c) incontestable as to answer.

There is another aspect of problem construction related to the matter of selection which is of great importance. While, in constructing the examination, you should be aware of the three phase factor aspect outlined above, it does not follow that you should use the bald dichotomies of the theoretic outline of possibilities in framing actual questions. This is the point that worries so many of you when you express the feeling that the very specificness of the objective problem often *gives away* the answer. This is a valid objection. However, rightly understood, it points to its own correction. Wherever possible use the *oblique* approach. Do not ask, "Is factor A important?"; or "Does factor A pull up or down?"; but phrase a question involving factor A in such a way that answering it will reveal the examinee's judgment of factor A's importance or directional pull. The application of this principle of oblique approach takes patience and practice, but is one of the most important rules of good examining. The ideal oblique approach, will present specific questions in a manner as closely parallel as possible to their occurrence in actual professional work.

If, thus, out of the complicated 50 factor situation, which could theoretically yield hundreds of separate problems, we select 15 or 20 which are important, properly difficult, airtight, and stated with a skillfully oblique approach, we will get an effective examining device which will give strictly comparable results as between examinees, and which will measure their understanding of factor relationships. This, I contend is measuring analytical and organizational ability as well as it can be measured.

The foregoing should be thought of as an outline of the general pattern of thinking lying behind the construction of objective examinations. You will find it useful whenever you try to set up an examination in a new and complicated area, and when you can't seem to get started. On the other hand, you will find that it is the pattern which you have always been using in the construction of examinations in simpler, more familiar areas where the problems already come easily. In these areas a consciousness of the pattern may give you still greater flexibility and sureness.

I can perhaps give a little help in the implementation of these ideas by a few suggestions on the practical problem of set-up and form. Objective examinations in other areas than accounting characteristically use large numbers of entirely discrete true-false or multiple-choice items. By this I mean that each item is entirely independent of all other items. Such independent item treatment may be used in some areas of accounting, but by and large we find that a different framework is more useful in our field. For lack of a better term I call the technique I refer to the "panorama and detail technique." The method is to set up a fairly full description of the business situation, accounting background, bookkeeping system, or set of special circumstances, and then to pose a series of detailed questions whose answers will depend upon the study of the general picture or panorama. This framework has

several real advantages. It is economical of time and wordage. It presents the problems in a manner approaching conditions of professional practice. Possibly most important, it greatly facilitates the oblique approach.

For instance, in the bookkeeping area, the panorama put before the examinee might be a description of the business situation together with a full presentation of the books of entry and chart of amounts. Against this background you might ask a great variety of questions. Which of the columns in the books would be used for the entry of certain transactions? These transactions may be typical, easy items or just as complicated and hard as you wish. To which accounts in which ledgers would the details and totals of the columns be posted? The design of the books and chart of accounts can make this a very tough question if you wish. What changes in the columnar arrangement should be made if certain transaction frequencies change, if changes of personnel or supplementary routine occur, or if certain bookkeeping machines become available? Thus the questions against the same general background may be anything from routine bookkeeping to complicated matters of system construction. Certainly this type of question is not open to the snap objection often voiced that the objective type problem gives itself away.

A related and very important principle in test construction is the fact that the difficulty of any item is directly proportional to the number of separate factors that must be considered in its solution. Against the panorama above suggested some problem may require consideration of three separate factors, one from the chart of accounts, one from one of the books of original entry, and one in the statement of the item itself. This three factor item would have a certain degree of difficulty. Now if we would change the problem so that it would require consideration also of some factor in the general description of the business, the item would become just that much more difficult. Addition of a fifth factor would step it up still further. Then too, the facts required may have been blatantly stated or they may be buried as subordinate phrases in statements ostensibly presenting more important matters. This degree of disguise of the necessary factors, of course, also affects the difficulty of items. With practice it can be manipulated at will. All of this, of course, bears directly on the principle of the oblique approach. If we take advantage of these possibilities we have come a long way from the discrete objective item which gives itself away to any good guesser.

Up to this point I have said very little about the specific *form* in which the items of an examination should be set. The true-false form against a carefully constructed panorama is often good, but it does have the disadvantage of allowing a 50–50 chance of guessing. Technically this form assumes that our subject matter represents a true dichotomy, or open and shut situation, with no third alternative. In many lines of learning the true dichotomy is rare. Accounting, however, is just full of true dichotomies. For instance, every figure entered in our accounts is either a debit or a credit—there is no ground between. Accounting, furthermore, has an infinite number of true "trichotomies" if I may coin the word. Whereven we inquire as to the effect of a transaction, an error, or a different way of doing something, upon the affected data of the balance sheet or income statement, the problem is always technically "trichotomous": plus, minus, or no effect. Any problem in this form reduces the guessing hazard to one in three. A bank reconciliation is a natural four-part multiple choice problem (I will not strain my license with quartre-chotomous). This reconciliation situation can be stretched to

a five-part form by sticking in a few plausible sounding items which are of no consequence at all and which, therefore, add a fifth type of item to the normal four types of reconciliation items.

A five-part multiple choice item reduces the guessing chance to one in five where it may be disregarded for all practical purposes. Matching tests, which are also very useful in accounting are in effect multiple choice problems with the number of choices determined by the number of items to be matched against.

The commonest and one of the best varieties of objective types in accounting is one which perhaps you do not typically think of as an objective type. That is the problem calling for a single specific dollar amount answer. For hand grading this can be left in free answer form, which theoretically eliminates the guessing chance altogether. If a test must be set up for machine grading so that the free answer form cannot be used, this dollar answer type can be converted into five part multiple choice by use of four wrong answers with the one right one. The ideal procedure is to use a preliminary run of the test in free answer form in order to determine the errors which the typical examinee group will *want* to make. A tabulation of such errors will provide the most effective possible distractors for use in the multiple choice form as finally set up for machine grading. The resulting test will have such high validity of items that we can forget our worries of the residual one-in-five chance of guessing. Finally we can always resort to the open-end multiple choice problem whose fifth choice is simply "some other figure."

It is impossible in any small compass to treat all the ramifications of objective examining. The process of item analysis merits really extended discussion. Here its importance can only be indicated. In addition to determining the net difficulty and effectiveness of each item it can be used to determine the effectiveness of each separate distractor in each item of the multiple choice form of test. It thus becomes extremely valuable in laying down the pattern of examinee thinking and in improving the power of the "red herrings."

An incidental advantage of detailed item studies of tests is to put the finger on particular areas of subject matter which our teaching has not put across effectively, which is always pedagogically desirable.

In summary, let me say that I am not arguing that all of the traditional forms of examinations should be abandoned. Many of them are still fine effective devices. I do contend, however, that wherever closely definitive grading of large groups is important, a move toward greater objectivity is indicated. I also contend that if necessary this move can safely go all the way to full objectivity allowing machine grading. I contend that this can be done at any desired level of subject matter, and that even the supposedly illusive ability to analyze and organize can be tested objectively.

I acknowledge that the construction of good objective tests, especially at the higher levels, is difficult. However, I am convinced that this difficulty is in considerable part a matter of lack of experience with the medium. I am convinced that the surface of the possibilities has barely been scratched. What we really need now is a great deal of experimenting by a great many individuals in order to really uncover the potentials of the new forms. My hope is that I may have convinced at least a few more of you to do this necessary experimenting. It is hard work but I believe you will find it very rewarding.

MEASUREMENT AND GUIDANCE IN THE FIELD OF PUBLIC ACCOUNTING*

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MEASUREMENT and guidance techniques developed in recent years for the professions of law, medicine, engineering, nursing and teaching have received considerable attention in professional literature and have become rather well-known to college personnel engaged in counseling and guidance work. Within each of these professional groups, the techniques now employed have evolved from a background of experimental work which has proved their value in separating those individuals specially qualified for success in the profession from those not so qualified. The profession which has most recently sought to apply techniques of measurement and guidance in an effort to improve the general calibre of its personnel is the profession of public accounting.

The personnel selection project instituted by this group is similar in general design to those carried out by other professions. However, it is unique in that the initial impetus for exploring the possible applications of measurement and guidance techniques in improving personnel selection came from the practicing members of the profession rather than from the educators. In each of the other professions it will be found that preliminary studies were carried out and reported by the training institutions before extensive programs were set up and supported by groups which represent the practicing segment of the profession. Not only initial interest, but also initial funds for carrying out the research and experimental phases of the accounting selection and guidance project came from the public accounting firms, working through their national professional organization, the American Institute of Accountants.

In response to the expressed need for improvement of selection procedures, the American Institute of Accountants appointed in 1943 a Committee on Selection of Personnel. This committee was asked to investigate procedures whereby the general calibre of personnel in the profession might be improved. A total of more than $85,000 was contributed by approximately 200 public accounting firms and individual members of the Institute to finance the work of this committee. Dr. Ben D. Wood of Columbia Univesrity was engaged as director of the project, and the Educational Records Bureau, a non-profit test service organization for schools and colleges, was selected for the project headquarters. The associate director of the Bureau, Dr. Arthur E. Traxler, was named assistant director of the program.

The early deliberations of the Committee[1] led to the identification of four broad factors which may condition success in the profession. These four were (1) general aptitude, (2) technical competence (3) vocational interests, (4) character and personality. Since the experience of others indicated that important aspects of general aptitude, technical knowledge, and inter-

* This article is a brief summary of a dissertation presented in partial fulfillment of requirements for the Doctor of Education degree at Wayne University, Detroit, Michigan. The article was presented as a paper at the spring conference of the National Council on Measurements Used in Education, Philadelphia, Pennsylvania, March 29, 1949.

[1] The early history of the project and progress to September, 1947, were summarized in a preceding article: Wood, Ben D., Traxler, Arthur E., and Nissley, Warren W., "College Accounting Testing Program," THE ACCOUNTING REVIEW, January, 1948.

ests could be measured effectively, while attempts to test personality and character traits were as yet of doubtful validity, it was decided to concentrate upon the development of objective instruments in the first three areas, leaving the fourth area to later research.

Vocational interest was the first field to be attacked experimentally. It was decided to experiment with the Strong Vocational Interest Blank, an immediately available test, rather than to attempt construction of a new test of interests. Through the cooperation of nearly a hundred accounting firms scattered throughout the United States, Strong blanks were completed by more than 2,000 public accountants and returned to the project office for analysis. On the basis of the results a median profile was established for public accountants in general. The trend of the median ratings indicated that public accountants tend to have relatively high scores for the occupational scales of accountant, CPA, production manager, purchasing agent, and banker with relatively low scores for the scales of psychologist, minister, artist, dentist, and architect. Other occupational scales such as physician, social science teacher, life insurance salesman, lawyer, and sales manager were ranged in between these two levels in the median profile.

The stability of this median or norm profile was supported by a supplementary project carried out by the Dominion Association of Chartered Accountants in Canada. Under the auspices of this organization, the Strong blank was filled out by 1,117 Canadian accountants and the tests were analyzed by the Educational Records Bureau. The median profile based on the scores of the Canadian group bears a remarkable resemblance to the median profile for public accountants in the United States. These results suggest that the general pattern of interests displayed by public accountants is rather stable and is not altered significantly by cultural differences which may be contributed by separate geographic areas.

Data compiled from experimental testing with the Strong Vocational Interest Blank are too extensive to be presented in this paper. The important contribution of this phase of the project was the development of the norm profile which broadened the base for interpreting orientation of interests toward the field of public accounting. Ordinarily, the use of the Strong Blank as a basis for predicting success in an occupation depends on appraisal of an individual's interest rating in that particular occupation supplemented perhaps by appraisal of ratings in a few related occupations. The norm profile makes possible the ready comparison of the general pattern of individual interest ratings with the trend of scores of employed accountants in general for 27 different scales, thus extending the basis for interpretation.

For evaluation in the other two areas to be attacked, a program of test construction was launched which resulted in two general types of tests: (1) a test of general aptitude named The Orientation Test, and (2) two levels of achievement tests, a Level I test designed for use at the end of the first full year of accounting study, and a Level II test intended for use near the point of graduation or for administration at the time of employment. These instruments were developed through the standard procedures of (1) preparation of preliminary items, (2) experimental testing and item analysis, and (3) preparation of final forms from items which showed acceptable validity and difficulty. The services of Dr. Kenneth W. Vaughn, then associate director of the Graduate Record Office of the Carnegie Foundation for the Advancement of Teaching, were obtained in preparing the Orientation Test items, while achievement test items were con-

tributed by Professor Leo A. Schmidt, University of Michigan. Professor Schmidt utilized a detailed problem technique, rather than a discrete item type of test. This technique works in this way: A general problem of work situation is presented in considerable detail. A series of multiple-choice questions is then posed, based upon the situation described. The questions are related to the general situation so as to test the examinee's ability to sort out the essential aspects of the problem and to combine all pertinent factors into a sensible answer.[2]

In its final form, the Orientation Test may be described as an intelligence test with items slanted somewhat toward business situations. The test contains three parts—vocabulary, reading of business materials, and arithmetic problems in the field of business. It yields a verbal score based on the first two parts, a quantitative score based on the third part, and a total score. The test requires fifty minutes of working time. Three separate forms of the test are now available. Norms have been developed for each year of accounting study and for employed accountants.

The Spearman-Brown reliabilities for total score on the Orientation Test for different populations have been found to range from .85 to .92, with a median of .89. The verbal score has been found to be somewhat more reliable than the quantitative score. The correlations between Orientation Test total scores and grades in accounting courses for different populations have ranged from .31 to .55 with a median of .42. In view of the unreliability of classroom marks as a criterion for estimating validity of a test, the latter correlations are fairly substantial. In two separate studies, correlations of .63 and .68 were obtained between total scores on the Orientation Test and total scores on the American Council Psychological Examination indicating some similarity between the measurements supplied by these two tests, although the degree of relationship is not exceptionally high. These data are generally favorable. However, additional validity studies are needed, and the quantitative section of the test may need lengthening in order to increase the reliability of the score yielded by this part. It is planned to carry out further research aimed toward continued refinement of the test.

The Achievement Test Level I is a two-hour test covering subject matter usually completed in the first year of accounting study. It yields a total score based on questions in account classification, accounting vocabulary, arithmetic of comparative profit and loss statements, entry and posting, bank reconciliation, adjustments in the ten column work sheets, analysis of depreciation history, and tracing the effect of errors. Two separate forms of this test are available, with norms for first, second, and third years of study. The Achievement Test Level II is a four-hour test with content sufficiently advanced to be applied either at the end of the senior year in college or at the junior or semi-senior level in accounting firms. Fundamental classification of relationships, entering transactions in books of original entry, posting books of original entry, analysis of adjustments, analysis of comparative operating statements of branches, cash record and bank reconciliation, analysis of depreciation histories, tracing the effect of errors, inventory methods, influence of inventories on net profits, comparison of inventory methods, and auditing problems are subject-matter areas included in this test. Two separate forms of the four-hour test are available,

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[2] See Schmidt, Leo A., "Objective Examinations in Professional Accounting," Bulletin No. 2; "Objective Examinations in Professional Accounting Samples and Comment," Bulletin No. 2A. New York: Committee on Selection of Personnel, American Institute of Accountants, 1947.

with norms for seniors and employed accountants. A shorter form Level II Achievement Test has been prepared and is now being used by a few firms and a number of schools. This newest form reduces administration time to two hours. It contains sections on bookkeeping, bank reconciliation, interpretation of a worksheet, manipulations to affect credit showing, depreciation, and burden estimates.

Reliabilities for the achievement tests have been consistently high. Estimates by Kuder-Richardson formula have ranged from .93 to .94 for the Level I test and from .96 to .97 for the Level II test. Correlations between Level I scores and grades in accounting courses have ranged from .33 to .76 with a median of .56. Validity data for the Level II test are being assembled from the employed accountants group, relating test scores to job performance ratings. The face validity of the Level II test appears to be quite high, all of the items having been studied critically by accounting specialists in the analysis of the preliminary items, the final form being accepted quite generally by practicing members of the profession.

The experimental work of this project extended over a period of three years. At the beginning of the school year 1946–1947, a service program was established for schools and colleges of business to provide objective data for counseling and placement and to commence the process of screening out those students showing little promise of success in this field while attracting and encouraging those displaying considerable potential for the profession. During the first year of operation of the service program, more than 26,000 tests were administered in 69 colleges and universities. Since this first year of operation, the college testing program has grown to include a total of nearly 200 institutions distributed throughout the country. Approximately 114,000 tests have been administered in the college program from the beginning of the project through the spring of 1949.

The college testing program is essentially a two-phase evaluation procedure. The fall program stresses use of the Orientation Test and the Strong Vocational Interest Blank, providing assessments of aptitude and interests early in the academic year. The second phase, the spring testing program, emphasizes the achievement tests. The Level I test has been used particularly at the end of the first year of study, but to some extent with second and third-year students. The Level II test has been used for testing at the senior level, and for testing junior accountants in the firms.

The Orientation Test and the Strong Vocational Interest Blank serve general counseling needs in schools of business and departments of accounting. This counseling function is also served by the Level I test results in the usual organization of the accounting curriculum. Ordinarily, a year of general accounting study is required of all business administration majors before choice of specialization is made. Orientation and Strong test results obtained in the fall are supplemented by an achievement measure in the spring in sufficient time to provide for a decision concerning choice of specialization before beginning the second year of study. In addition to the counseling use of test scores, the school is interested in evaluating the effectiveness of admissions standards, curriculum organization, and methods of instruction through comparison of the general standing of local students with that of other college groups throughout the country. The summary bulletin prepared by the project office at the conclusion of each program contains comparative charts showing by code number the relative standing of each participant among other institutions where the tests are

		1	2	3	4	5
128–130						
124		1				
120		1				
116		10	1	1		
112		23	5	1		
108		25	6	3	1	
104		33	10	2	1	
100		40	13	6	2	
96		24	16	4	5	3
92		35	22	6	4	2
88		31	24	9	7	1
84		28	30	6	7	
80	Q3*	24	38	12	11	3
76		19	32	9	23	3
72		20	25	20	15	7
68		11	24	12	19	3
64	Md*	10	26	22	32	5
60		4	16	14	23	15
56		4	17	15	24	7
52		2	12	16	35	22
48	Q1*	1	11	14	27	16
44				11	33	8
40			4	11	33	11
36				13	24	22
32			1	4	14	21
28			1	4	12	15
24				8	6	17
20				1	6	16
16					2	10
12				1	2	7
8					1	5
4						5
0–3						
Total		346	334	225	369	224
Q3		104.8	90.3	77.2	68.6	54.7
Md		94.2	79.8	64.1	54.8	38.9
Q1		82.6	67.3	48.9	43.1	27.1
Range		48–125	29–116	14–116	9–109	4–98

* General norms based on results of 5,328 1st year students in 36 colleges.

These data are taken from *The College and Professional Accounting Testing Programs: Results of Tests in Schools of Business of Fifty-Seven Colleges and in Fifteen Public Accounting Firms, Spring, 1947*. The American Institute of Accountants Accounting Testing Program, Bulletin No. 3. New York: Committee on Selection of Personnel, American Institute of Accountants, August, 1947. Table IV, p. 17.

FIGURE 1.—Distributions of scores made on orientation test, form B, by first-year students of accounting in five colleges.

administered. Figure 1 illustrates the comparison provided by these charts. The distribution of Orientation Test total scores of first-year accounting students in five schools selected from the participants in the 1947 spring testing program are compared with the "national" norms. The raw score scale is given at the left of the figure. The broken lines running horizontally across the page indicate the Q3 or 75th percentile, the median or 50th percentile, and the Q1 or 25th percentile for the entire group of more than five thousand students in thirty-six different colleges administering Form B of the Orientation Test in the spring of 1947. At the bottom of each column, data are shown concerning the total number of students in each group, the Q3, the median, the Q1, and the range of scores in the particular colleges. The median and interquartile range are shown graphically be-

side each distribution, the median indicated by the short horizontal black line, and the interquartile range by the vertical line adjacent to the distribution. The colleges are designated only by code number at the top of the figure.

While there is a great deal of overlapping of scores, it will be seen immediately that there are marked differences in the general level of ability displayed by these five separate groups. Most of the students in College 1, for example, have scores on the Orientation Test which surpass the 75th percentile in "national" norms, while more than half the students in College 5 have scores which fail to reach the 25th percentile in "national" norms. These comparisons may reflect more rigid admissions standards on the part of Colleges 1 and 2 than those practiced by Colleges 4 and 5 at the time of this testing.

These wide differences among schools are apparent in the comparative charts for both aptitude and achievement. In several instances, the comparisons provided have resulted in critical analysis of procedures employed and positive steps toward more careful selection and toward general improvement of instruction.

In addition to these individual and group evaluation functions, the results of the Level II Achievement Test serve a very useful purpose as an aid to professional placement of graduating students. The student's performance on the advanced achievement test yields an indication of his knowledge of accounting which can be compared with that of graduating students in schools and colleges throughout the country. Hence, the achievement test score is considered by accounting employers to be a valuable supplement to school grades in evaluating the graduate's proficiency in the field of accounting. As a matter of fact, more than 1,300 accounting firms have indicated by published statement that they intend to give considerable weight to scores on these tests in considering applications for employment.

In addition to the college testing program, the committee has established a service program for accounting employers which makes the instruments available for testing prospective and present employees in the firms. More than 100 accounting firms and business organizations have obtained permission to use the tests by appointing examiners who have been approved by the Committee on Selection of Personnel to administer the tests. In the professional program as well as in the college testing program, the Committee maintains control of test supplies at all times. Booklets are furnished on a rental basis and are returned to the project office upon completion of testing. Detailed procedures have been worked out for maintaining a strict accounting of all test supplies.

A central file of test results is maintained by the project office. Any person who has taken the tests may have his scores reported at any time to a prospective employer. *The scores are not released without the written request of the testee.* These records are also used in a continuing program of research with reference to reliability and validity of the tests and the development of specialized norms.

The schedule of charges applied for participation in these programs is rather detailed. The charges have been set on a basis that will provide eventual self-support for the project with the general costs for the colleges sufficiently nominal to allow inclusion in local departmental budgets, while the general level of charges for use of the tests by firms runs considerably higher. Local scoring is permitted for all the tests with the exception of the Level II Achievement Test. When tests are scored locally, the answer sheets are returned to the project office as soon as local records are completed. More complete information con-

cerning costs and other details of participation can be obtained from the project office of the Committee on Selection of Personnel, 21 Audubon Avenue, New York 32, New York.

The general contributions of this latest effort toward self-improvement on the part of a professional group may be summarized as follows:

1. It has been demonstrated that important aspects of aptitude and achievement in this field can be measured objectively. The objective measurement of achievement particularly has been refined through departure from the discrete item approach and utilization of the detailed problem technique. The method which has been developed may have broad application in subject-matter areas where attempts are made to measure judgment and ability to perform critical analysis.

2. A new technique has been developed for use of Strong Vocational Interest Blank results. This technique supplies a broader norm base for interpreting orientation of interest toward a field of work. A norm profile of median ratings for twenty-seven of the occupational scales used by Strong has been developed for the field of public accounting.

3. A third contribution of the work of this project issues from the broad-range approach to the problem of personnel improvement. Instead of focusing attention on a single stage of preparation for professional status, the entire process of initial selection, training, employment, and advancement has been considered, and the instruments which have been developed are available for use throughout these various stages. Although more evidence is needed to establish the effectiveness of the program at the employment and promotion points, the attempt at continuity of measurement has resulted in coordination of effort which is unique for projects of this type. Frequently, guidance and selection efforts are carried on independently by educators and employers. The effectiveness of the broader approach is demonstrated in the following fourth stated contribution of this project.

4. A commendable degree of cooperation has been built up between educators and employers in this professional area. The work of this project has been a medium through which employers have become more aware of problems of initial selection, training and instruction. At the same time, accounting instructors have come to recognize more adequately the needs of employers. More attention has been given to those curriculum areas suggested by employers as the ones which need particular emphasis in training students for public accounting. This interchange between the two areas of the profession has crystalized in establishment of an annual accounting employers conference sponsored by the University of Michigan, providing a two-day discussion of mutual problems for representatives from colleges and accounting firms. Further evidence of extensive cooperation is found in the increasing utilization of educators and training specialists in the varied committee work of the Institute.

5. The practical contribution of this project is, of course, the development of a broad service program for schools and colleges of business, providing objective data for improved guidance procedures early in training as well as progress checks at various levels of advancement throughout the course of accounting study. Norms established in this program provide a sort of national yardstick for measuring the aptitude and achievement of accounting students.

6. A sixth contribution certainly not of least importance is the incidental improvement of personnel practices in both the colleges and firms brought about by the work of the project. In the schools this has

taken the form of critical examination and improvement of admission standards, curriculum organization, and methods of instruction; in the firms this incidental education is reflected in more widespread acceptance of objective evaluation procedures as supplement to the interview, reference check, and subjective evaluation of marks and grades.

The service aspects of this project are now being shaped into a self-supporting program which will continue to provide objective measurement of aptitude, interest and achievement at various levels of training and preparation. It is hoped that within the near future the committee can turn attention to the problem of appraising personal qualities and to the establishment of a number of long-term studies to provide broader evaluation of techniques which have been developed. This project is of considerable significance as it relates to measurement and guidance in the field of business education and as it becomes more generally known, its progress will be followed with interest by persons engaged in personnel work.

CURRENT ACCOUNTING PROBLEMS*

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ACCOUNTANTS, it seems, always have "current problems." Some of us would not have much to do, but our lives would be much less interesting, if that were not the case. If all concerned had a better gift of prophecy, or perhaps if all could be convinced that economic or business disturbances, both inflationary and deflationary, are recurring, and consequently some accounting problems are also recurring, we might make more headway in reaching mutually acceptable solutions.

From its inception the Securities and Exchange Commission has had the active cooperation of accounting teachers and practitioners, both public and private, in the development of its accounting rules and regulations. Reciprocally, the Commission has had an active interest in the work of the American Accounting Association in the preparation of its successive statements of "Accounting Principles Underlying Corporate Financial Statements" and in the work of the American Institute of Accountants' Committees on Accounting and Auditing Procedure.

All of you, of course, are familiar with your own Association's statement, the bulletins of the Institute's committees, and with the accounting requirements of the SEC as reflected in Regulation S-X, Accounting Series Releases, and in published opinions. While I realize that registrants with the SEC represent only a small fragment, in numbers, of business units in the United States, I think we can assume that sooner or later accounting students training to enter the profession of public accounting may serve such registrants. When they do, in serving commercial and industrial clients, they will deal with an agency interested in obtaining a reasonable degree of consistency in the form and content of financial statements of companies not required to comply with a uniform system of accounts, as in regulated enterprises. Although the first registration and report forms adopted by the Commission included rather specific instructions as to the content and, more especially, the form of the financial statements to be filed, the instructions now found in Regulation S-X permit a certain amount of variation in terminology, form and content. After some disturbing experiences and difference of opinion on the basic question, the Commission in 1938 issued a statement of its administrative policy with respect to financial statements:

> "In cases where financial statements filed with this Commission pursuant to its rules and regulations under the Securities Act of 1933 or the Securities Exchange Act of 1934 are prepared in accordance with accounting principles for which there is no substantial authoritative support, such financial statements will be presumed to be misleading or inaccurate despite disclosures contained in the certificate of the accountant or in footnotes to the statements provided the matters involved are material. In cases where there is a difference of opinion between the Commission and the registrant as to the proper principles of accounting to be followed, disclosure will be accepted in lieu of correction of the financial statements themselves only if the points involved are such that there is substantial authoritative support for the practices followed by the registrant and the position of the Commission has not previously been expressed in rules, regulations or other official releases of the Commission, including the published opinions of its Chief Accountant."

* This paper was presented at the annual meeting of the American Accounting Association, Ann Arbor, on September 8, 1949.

This statement of policy is a declaration by the Commission consistent with recommendations made by Professor Paton at an Illinois accounting conference in 1946 that, "First, management must become more receptive to the view that accounting is not designed to paint pictures corresponding to managerial whims and prejudices. In other words, management must become more willing to let the accountants call a spade a spade—show things as they are rather than as management would like to see them. Second, accountants must become more resourceful, adaptable, less hidebound, so that management may be effectively assisted. Third, both management and accountants should remember that their primary responsibility is still to the investors—those who put up the money—the folks who have been the forgotten men for some time." I certainly have no quarrel with those sentiments. They remind me of a particularly difficult conference in which counsel for the registrant did most of the talking in support of a treatment of reserves to which we had taken exception. After the conference broke up one of the group was overheard to remark that "they seem to want us to tell the truth rather than be conservative."

Most of our "current problems" arise in the appraising of transactions reflecting new methods of doing business or matters upon which there has been a wide difference of opinion among recognized accounting authorities for many years. Thorough analysis and discussion of the new problems and reappraisal of the old controversial problems are matters of mutual interest for all of us here, as well as for the registrants and certifying accountants directly concerned. Two articles which appeared in THE ACCOUNTING REVIEW a year ago suggest the possibility of discussing some of these problems under the general theme of consistency in accounting.

One of the articles expresses the fear that the doctrine of consistency is being followed blindly by accountants and therefore improvement in accounting practices is being prevented. This view is somewhat in contrast with the other article dealing with examination of 150 current (1946–1947 vs. 1945–1946) reports to stockholders. This article contained the statement that "none of the opinions [of independent public accountants] included exceptions, qualifications, or explanations bearing *directly* upon the question of consistency with respect to generally accepted accounting principles." The author listed ten classes of items gleaned from the reports which *seemed* to him to be cases of inconsistency.

Dealing with this problem is a major part of our work in reviewing the financial statements filed with us and I think I can assure you that our efforts are not directed to suppressing disclosures of inconsistencies from year to year. On the contrary, we insist upon exceptions being noted if the changes are significant. And there is where the element of judgment enters. There are usually four parties involved in a conference over such matters if a registration under the 1933 Act is involved—representatives of the registrant (usually the chief accounting officer), a partner of the firm of certifying public accountants, a representative of the underwriters, and accountants of the Commission's staff. If the conference is a pre-filing one, it may have been suggested by any one of the parties; if after filing, it probably resulted from a letter of deficiencies. Such a conference is an informal means of getting at the facts behind the accounting and usually leads to a conclusion as to whether an exception as to consistency or a change in method of accounting or reporting is necessary.

The rules that govern whether an exception should be taken as to consistency

are found in Regulation S-X. Among other requirements rule 2–02 says that "The accountant's certificate shall state clearly: . . . the opinion of the accountant as to any changes in accounting principles or practices, or adjustments of the accounts, required to be set forth by rule 3–07; . . . . " Rule 3–07 requires that "If any significant change in accounting principle or practice, or any significant retroactive adjustment of the accounts of prior years, has been made at the beginning of or during any period covered by the profit and loss statements filed, a statement thereof shall be given in a note to the appropriate statement, and, if the change or adjustment substantially affects proper comparison with the preceding fiscal period, the necessary explanation." To complete the disclosure, rule 2–02 goes on to require with respect to exceptions that, "any matters to which the accountant takes exception shall be clearly identified, the exception thereto specifically and clearly stated, and, to the extent practicable, the effect of each such exception on the related financial statements given."

Experience seems to indicate that most registrants and their independent public accountants prefer to have the financial statements and accountants' opinion contained in the report to stockholders in substantial agreement with the report to be filed with the SEC. Since the report to stockholders usually is published weeks or months before their report is filed with us, our requirements must be anticipated, or, if a troublesome point is known to be present, conferences are sometimes requested prior to publication of the report to stockholders. Occasionally when agreement has not been reached before such publication the report to us may be different from the report to stockholders and attention may be called to that fact.

There is no real difference in our requirements for disclosure of inconsistencies in accounting from those which prevailed in the accounting profession prior to the existence of the SEC. In the three-way correspondence relating to audits of corporate accounts between the American Institute of Accountants, the Controllers Institute of America and the New York Stock Exchange in December 1933 and January 1934, agreement was reached as to a short form of accountant's report in which the opinion paragraph contained the phrase "in accordance with accepted principles of accounting consistently maintained by the Company during the year under review." One of the notes referring to this report contained the warning that "This certificate is appropriate only if the accounting for the year is consistent in basis with that for the preceding year. If there has been any material change either in accounting principles or in the manner of their application, the nature of the change should be indicated." The form of report and the accompanying instructions as to its use were included in 1936 in the American Institute of Accountants' bulletin entitled "Examination of Financial Statements by Independent Public Accountants" which was in use unamended until the series of Statements on Auditing Procedure was launched in October 1939 following the disclosures in the McKesson case. The first of these statements recommended a short form report or opinion which closed with language still in general use— "in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year."

It may be noted that rule 3–07 speaks of "any significant change in accounting principles or practice" whereas the note to the Institute's 1934 certificate refers to "any material change either in accounting principles or in the manner of their application." Occasionally an accountant has maintained that in a particular case there was no change in accounting principles—

the difference in the figures as between years being due only to the manner of applying the principles. A revision of Regulation S-X now in process will eliminate this opportunity to quibble by amending our rule to include change in manner of application as well as change in principle.

Sometimes attention is directed in the statements themselves to a change in the method of their preparation. When two years' figures are presented and the earlier year is adjusted to conform to the later year the statements are comparable and of course no exception as to consistency is necessary. A good example of this situation recently came to my attention. (My reference here, as well as the other examples I shall use unless clearly indicated otherwise, is to the published report to stockholders.) In 1947 a substantial profit on the sale of land and buildings had been shown as a non-recurring credit to net income. In the 1948 report, presented in comparative form, this item was shown in earned surplus for 1947 where the change in procedure was noted, and in the 1948 earned surplus there was a substantial debit for development costs abandoned. Handling the 1948 extraordinary debit as the extraordinary credit had been reported in 1947 would have resulted in net income being reported as approximately one seventh of the preceding year whereas by the change in procedure the net income for 1948 was shown as one eighth more than 1947. The latest revision of one of the leading accounting texts in discussing extraordinary debits and credits to income or surplus endorses the method adopted here for 1948 although the author recognizes that advocates of a "clean surplus" would show these items in the income account. The example I have cited seems to be a clear cut case of handling the extraordinary items in the two successive years to attain the result desired. The amount of the debit was clearly large enough to come within the exception in the American Institute of Accountants' Research Bulletins Nos. 32 and 35 but to which the Commission has objected on the grounds that such exclusion of profit and loss items from the income account is misleading. The outline for an income account set forth in Regulation S-X includes items of "Other Income" and "Income Deductions" requiring separate disclosure of significant amounts with explanations designating clearly the nature of the transactions involved.

This matter of a "clean surplus" compels me to observe that the teaching that adjustments of prior years' profit and loss items must be made through earned surplus is reflected in many financial statements. Perhaps the most persistent single item given this treatment is adjustments of prior years' income taxes. Supporters of either the American Accounting Association's statement of accounting concepts or the Institute's Research Bulletin No. 23 on "Accounting for Income Taxes" would report such adjustments in the income statement for the year in which the transaction took place, except that Institute members might follow the suggestion contained in their bulletin that if the corrections were so large as to be likely to produce distorted interpretations of income the entries might be charged or credited to surplus with an indication of the period to which they relate. A statement I saw a few days ago contained two tax adjustment credits to earned surplus and one debit for an additional assessment, none of the gross amounts being significant by any test and the net result being $19.00 one way or the other. Cluttering up earned surplus with such small items seems absurd even though the entries as made do have strict theoretical support in some quarters.

Accounting for the cost of vacation allowances has been the subject of com-

ment in the 1947 and 1948 financial statements of several large corporations, with a variety of treatment. In one case, in which the company apparently disapproves of footnotes, for there are none, a short lucid paragraph in the accountants' opinion reports the change in accounting and takes a clear cut exception as to consistency in the following language:

> "Prior to 1947 it was the policy of the company and its subsidiaries to charge vacation payments to income account as and when the amounts were disbursed. Effective January 1, 1947 the companies adopted the policy of accruing the estimated cost of vacation payments in the year the vacation pay is considered to be earned, which change we approve. The profit for the year 1947 has, therefore, been charged with the cost of vacations paid as well as vacations earned in that year with the result the profit has been reduced by $1,630,000. In all other respects the principles of accounting maintained by the companies during the year were consistent with those of the preceding year."

The amount of the duplicate charge to income here was two per cent of wages and salaries, and approximately five per cent of net income and current liabilities.

In another company in the same industry served by the same firm of independent public accountants a similar change in policy was explained in a footnote with the accountants' exception as to consistency expressed in their certificate as follows: ". . . in conformity with generally accepted accounting principles applied on a basis consistent in all material respects with that of the preceding year, except for the change in accounting for vacation allowances explained on page 13, which change has our approval." In this case the duplicate wages were charged to surplus among other extraordinary debits and credits. The amount in this case was three per cent of wages and salaries, seventeen per cent of net income and seven per cent of current liabilities. In still another company in the same industry, served by the same accountants, the change in accounting for vacation pay is referred to in a footnote which in turn refers to an explanation in the text of the report. No exception as to consistency as to this point was taken by the accountants in their certificate although another change in accounting was mentioned. In this case the duplicate charge was to income and amounted to two per cent of wages and salaries, fifteen per cent of net income and four per cent of current liabilities. In statements filed with us the administrative problem of reconciling these varied treatments of the same situation becomes one of judgment as to significance of the accounting in each case, which is the same problem as faced the accountants. But we don't always agree!

As was to be expected, the published report of a correspondence school affords an example of an exception to consistency in the application of generally accepted accounting principles. The accountants in this case expressed their exception by the insertion of a phrase in the standard certificate to read: "which, except for the change (which we consider proper) in the treatment of recoveries and the provision for losses, as explained in Note A. . . . " Note A explained that in the current year recoveries and provisions for losses were recorded in a manner which had the effect of increasing sales and provisions by approximately the same material amount but with no effect on gross or net income. The change in income tax regulations late in 1947 relating to deductions for bad debts by banks should be cause for a somewhat similar comment in bank reports where the change has been adopted, as I have seen in one well publicized bank report, which, however, contained no accountants' certificate.

Exceptions taken because of changes in accounting policy are not always related to transactions affecting profits. Two cases appeared in my small sampling in

which the accountants noted changes (approved by them) in the manner of making provisions from surplus in connection with preferred stock retirements. The changes related only to the timing of the charges to surplus. Different accounting firms were involved.

A paragraph from the accountants' report to the board of directors and stockholders of a department store company will serve to introduce a subject which has had the attention of the Commission for a number of years but which has achieved considerable prominence in the last two years or so. The paragraph reads:

> "The accounting principles followed by the companies during the year have been consistent with those of the preceding year, except that payments under the employees' retirement plans applicable to services of prior years have been charged to earnings, whereas in the prior year such payments were charged to accumulated earnings retained in the business; this change, which has our approval, is explained in Note G to the financial statements."

Note G spells out the effect of the change and adds a paragraph:

> "It is estimated that the aggregate amount which may ultimately be paid in future years in respect of such services for prior years, if the plans continue, will approximate $4,850,000."

The policy to charge earnings for pensions based upon past services is in accord with the policy advocated by the Commission for some time and recommended by the Committee on Accounting Procedure of the American Institute of Accountants in Research Bulletin No. 36. The reasons for reaching this conclusion are adequately stated in the bulletin. However, an unsolved problem not even mentioned in the bulletin is suggested by the $4,850,000 in the note just quoted. Since a realistic approach to the problem leads to the conclusion that the liability must eventually be met, barring serious economic reverses, we feel that the liability actuarially determined should be reflected in the balance sheet. In the absence of a strict legal liability for the pensions based on past service, our practice has been to require a footnote representation as to the company's obligation under its pension plan.

Inventories are a recurring cause of trouble for accountants and for us, and should demand close scrutiny by the investor. Exceptions taken by certifying accountants on grounds of lack of consistency in the accounting principles applied in valuation are common. The accountants' certificate attached to the statement of an oil company refers to two footnotes dealing with changes in accounting principles. The first of these, dealing with changes in inventory valuation, sounds a bit complicated for a layman but should be interesting to a cost accountant:

> "Prior to 1948, additions to inventories from current production of natural gasoline products were valued at prices based on market, and additions to inventories of refined products at manufacturing cost computed on the by-product method, with crude oil charged at market value. For the year 1948, with minor exceptions, additions to inventories of natural gasoline and refined products were priced at manufacturing cost computed on the relative value method, refined product costs including crude oil at cost. This change in accounting procedure has resulted in reducing net income for the year 1948 by $5,245,017."

The other note dealt with a change in accounting for dry holes and concessions with a similar effect on income for 1948. A third note refers to the company's policy of making minor revisions in accounting procedures to conform to changing conditions and experiences, the effect of which, except for the two dealt with specifically, was not deemed significant.

Some of the airplane companies have had inventory problems since the war. For example, one such company noted a change to exclude commercial selling expenses

from inventories (giving the amount in work-in-process at the beginning of the year). The abandoned procedure was a wartime practice appropriate under government contracts. The certifying accountants called attention in their certificate to the change.

In a certificate addressed to the stockholders of an old company in financial difficulties, the public accountants omitted a statement as to consistency with the preceding year but called particular attention in their certificate to the notes applicable to the financial statements. While somewhat long, I think the four paragraphs are of sufficient interest to quote:

> "Members of our staff were present at the plant of the Company when the inventories were being checked physically and observed the work of the Company's employees in that connection. We reviewed the methods used in taking and compiling the inventories and made physical tests sufficient to satisfy ourselves as to the substantial accuracy of the inventory quantities. We also reviewed the pricing of the inventories and ascertained that they were stated on the basis of materials and direct labor, as customarily computed by the Company for inventory purposes, with provision for slow-moving, obsolete and irregular items. Pursuant to the Company's consistent practice, all indirect manufacturing costs were omitted from the inventory stated on the balance sheet.
>
> "If effect were given in pricing the inventory to the Company's current costs as to materials and direct labor and to an application of estimated indirect manufacturing costs, the inventory at the close of the period valued on the basis of lower of cost or market, would have been increased approximately $1,580,000. It is estimated further that if the opening inventory had been valued on a similar basis, the operating loss for the year 1947 would not have been materially changed.
>
> "During the year ended December 27, 1947, the Company made no provision in its financial statements for the customary contribution under its pension plan for past services. The Company also changed its basis of providing for current costs of the pension plan from the previous practice of making annual provision therefor and now meets current costs of the pension plan on a monthly basis. It is estimated that the loss for the year ended December 27, 1947 would have been approximately $170,000 greater if the Company had continued to make provision for pension plan payments on the former basis.
>
> "In our opinion, the accompanying balance sheet and the related condensed statements of profit and loss and surplus, together with notes to financial statements, and comments contained in this certificate, present fairly the position of [the] ——— Company at December 27, 1947 and results of operations for the year then ended."

In contrast to the above case, in the examination of the financial statements of a new registrant under the Securities Act it was observed with respect to inventories that "costs as to work in process and manufactured stock include material and labor only, without manufacturing or other overhead." Despite this comment in the note the certifying accountant expressed the opinion that the statements "with their footnotes" were in conformity with generally accepted accounting principles and practices applied on a consistent basis. The footnote dealing with inventories as it became effective was amended to show what the inventories at the several year ends would have been if manufacturing overhead had been included. The effect on income was also set forth. The accountant's certificate was amended to include a paragraph taking exception to the inventory methods of the company, in the following language:

> "Under the Company's practice, work in process includes material and labor only, without manufacturing or other overhead. I am of the opinion that the inventory valuation of work in process more properly should include the applicable proportion of manufacturing overhead, but the effect of such inclusion upon the Company's assets and net income would be relatively insignificant, as shown in footnote D in the accompanying financial statements."

However, the first annual report filed with the Commission reflected a change in the accounting to include manufacturing

overhead in the inventory and the accountant expressed an appropriate exception as to consistency in his certificate. On this point *Montgomery's Auditing*, seventh edition, has this to say:

> "Overhead Methods.—In practice there is great latitude in the application of overhead to inventories. On the one hand, it is generally accepted that all overhead should not be charged off as incurred (Accounting Research Bulletin No. 29), and on the other, it is very rare that all items of overhead are appropriate to apply to inventories. As a corollary to the principle that all overhead should not be charged off, there is, in the authors' opinion, a presumption against the exclusion of reasonably determined overhead costs from inventory. The exclusion of such costs may sometimes be tantamount to a reserve which reduces the inventory below an accepted basis; such reserves are discussed in Accounting Research Bulletin No. 31, issued in October, 1947. There has recently been further support of the method of charging off fixed overhead as incurred and of applying to inventories only such items as vary with production; while this method is not widely in use and is not generally recommended, it may have merit under certain circumstances."

There are indications that this subject warrants further study.

The popular inventory method of "Lifo" has been praised and condemned so generously in poetry and prose by such masters of the English language as Peloubet and Wilcox that I hesitate to say anything on that subject. However, the topic is too important to pass over. Even opponents of the method must concede that "Lifo" is a generally accepted method for valuing inventories. The question before us then is whether the method presents any special problems of disclosure in financial statements intended to inform investors. Certainly a change from some other method of valuation to the "Lifo" method is a significant change in principle and usually results in sufficiently material effect on balance sheet and income figures to warrant full disclosure and an exception by the certifying accountant on the matter of consistency with prior years. For some elaborate disclosures of this type it is only necessary to turn to the department store field in which some companies had adopted the method in 1941, then abandoned the practice in the face of adverse Treasury Department rulings and then readopted the method after the favorable U. S. Tax Court decision in 1947. Some of the notes reciting these changes have required a full page in reports to stockholders. In situations such as these, where the differences in valuation between "Lifo" and a basis reflecting more nearly "current values" are material, we have required the disclosure in financial statements filed with the Commission that such differences exist. It seems desirable, also, that where the "Lifo" method is used and no "cushion" exists, that fact should also be disclosed to avoid the possible interpretation by the investor that "Lifo" always indicates a safety factor.

A statement with respect to depreciation policy is a requirement of Regulation S-X and, as any reader of accounting literature knows, depreciation accounting is a popular subject for discussion. Certainly, the topic has not been ignored in the last few years in corporation reports to stockholders. Just what constitutes a significant change in depreciation policy has been the cause of some disagreement among accountants. Some have maintained that a mere change in rate is not a change in the policy to amortize the cost of the asset over its useful life and that such a change is a normal part of applying the policy as it is customary to alter the rate as more accurate estimates of remaining useful life become possible. Others insist that if the change results in significantly different depreciation charges, notice should be taken in the accountants' certificate so that the statements may not be misleading. This view was expressed by the

first chief accountant of the Commission in an address in 1937. As indicated earlier in this paper, a literal reading of rule 3–07 does not seem to require this strict interpretation. A reexamination of the matter with leaders of the accounting profession led to the conclusion that the rule should be clarified on this point to include change in manner of application as well as change in policy. In the application of this rule it should be understood to apply to changes effected by management decision and not to changes in amounts of items due to outside factors beyond the control of management. A change in amount of depreciation, for example, due to a change in operating rate of a plant when depreciation is measured by rate of production would not require any comment as to consistency in the application of accounting principles. However, a change from a straight line basis to a productivity basis would require an exception as to consistency, as in this note to which the certifying accountant called attention, with approval, in his certificate:

> "It is the policy of the company to depreciate fixed assets over their estimated useful lives. Effective January 1, 1948, however, instead of the straight-line method heretofore used, it has been decided to allocate depreciation over future years based upon activity of each year as related to 'normal' activity. For this purpose the average activity for the 20 years ended December 31, 1943 has been chosen as representing 'normal.' The depreciation charged for the year ended December 31, 1948 is $95,721 in excess of what the charge would have been if the previous policy had been continued."

A year ago depreciation based upon purchasing power recovery or to provide for excessive construction costs, depending upon the circumstances in particular cases and the interpretation of their current economic condition by management, was the subject of active discussion in accounting and business circles. Today, to a large extent, accelerated depreciation has gained the center of the stage. For those who are interested in the immediate past history of this subject the 1948 annual reports to stockholders of United States Steel Corporation and E. I. du Pont de Nemours & Company furnish the most accurate statements available of the views of those exponents of these methods. Further discussion seems unnecessary here except to suggest that there is much to be said for substituting a method of depreciation based upon plant activity for straight line depreciation. I think we should start with the assumption that a decision to build a plant, a new store or an addition is based on the best business judgment of the management at the time as to the prospects for profitable employment of the property. It seems reasonable to me to assume also that demand in the immediate few years is easier to predict than that of the later years of a plant's potential physical life. The basis for accelerated amortization of the cost of plants during periods of anticipated peak demand seems to me to be well founded and much more realistic than the uniform application of a straight line rate of depreciation over a plant's anticipated useful life. Also obsolescence as a factor is recognized in any theoretical discussion of depreciation and should be taken into account in the early period of a plant's life for substantially the same reasons and also in anticipation of some possible new competing gadget. While recording plant assets at cost remains the generally accepted basis of accounting, the adequate recognition of activity and obsolescence factors should serve to produce a proper matching of costs with revenues.

In conclusion I want to revert to one of the articles I mentioned in the beginning. The author said that "the inclusion of words of exception, qualification, and even explanation in the accountant's opinion tends to carry or imply some stigma of wrongdoing or deviation from the author-

ity. How to attain adequate disclosure in the face of this reaction is a real question." I confess that in our work at the Commission we see something of the background for the view here expressed. But I think I have shown by many examples that such a feeling is not universal and should not apply at all to an exception as to consistency when the change reported reflects an improvement in accounting policy. The examples I have quoted serve to illustrate how many accounting firms solve the problem very simply by stating the change and its effect on income, or other accounts affected, in their certificate or by referring to a footnote or, in some cases, to a page in management's report, in either case followed by the simple statement that they approve of the change. If the accountants' certificate carries any weight at all, and I assume it does, this treatment should serve to reassure the investor.

DEPRECIATION AND PROFIT DETERMINATION

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INCREASED INTEREST has been focused on the figures for reported business income in recent years. In seeking guidance as to appropriate wage, price and allocation, and taxation policies, earnings reports in terms of individual firms, industries, and all business have taken an undisputed position of importance. These same reports continue to be consulted as pictures of the past or possible clues to the future by stockholders seeking to assess the effectiveness of business management, investors comparing alternative investment opportunities and business management making decisions as to asset allocation. Yet there are widespread current expressions that the profit figures shown in these statements are inflated or overstated; that the profits shown are in some measure fictitious or illusory. A central theme in many of these expressions is that inadequate depreciation policy contributes to the inflating of profits.[1]

The holders of this view contend that basing depreciation charges on original cost in periods of marked change in prices contributes to a distortion of the profits figure. In its stead they recommend a depreciation charge based on the current cost of plant facilities. The desirability and practicability of effecting a change from depreciation charges based on historical cost to those based on current costs will be considered in the following sections. A necessary preliminary, however, is the consideration of the function of depreciation charges in the determination of business income.

THE FUNCTION OF DEPRECIATION

There is general agreement among economists and accountants that business income is measured by the excess of revenues over the cost of producing those revenues. One of the costs of producing revenues is, of course, the gradual consumption of the service-rendering ability of capital assets that is described as depreciation. The central purpose of depreciation accounting is to allocate the cost of these long lasting assets to the periods of use in a reasonable and orderly fashion.

The basic current depreciation problem is whether the services annually consumed should be valued in terms of the purchase cost of the capital asset or in terms of the current cost of securing an equivalent asset. In the case of most other costs of production, the time interval between purchase of a service and its utilization in production is customarily so short that little difference between purchase cost and current cost will appear. The charge against revenues for these items is made in terms of acquisition costs which are approximately equal to current costs.[2] In the

[1] The hearings of the Subcommittee on Business Profits of the Joint Committee on the Economic Report in December, 1948, brought forth many such statements. Officials of the United States Steel Corporation, the Studebaker Corporation, General Electric Co., and Standard Oil Company of New Jersey among other companies as well as Professors Paton and Slichter testified to that effect. The testimony before the Presidential Steel Board in August, 1949, brought forth many of the same arguments.

See also, J. L. Dohr and W. A. Paton, "Depreciation and the Price Level," THE ACCOUNTING REVIEW, April, 1948, p. 115 and p. 118; W. J. Graham, "The Effect of Changing Price Levels upon the Determination, Reporting, and Interpretation of Income," THE ACCOUNTING REVIEW, January, 1949, p. 15; and Walter Adams, "Accounting Practices and the Business Cycle," *The Journal of Business*, April, 1949, p. 119.

[2] Where inventory costs are charged on a first-in, first-out basis, there is also likelihood of a departure from current costs. That problem, in one sense, is not so

case of capital assets, however, it is possible for a substantial divergence between purchase cost and current cost to develop before the asset is completely utilized. When this spread develops, a choice between the two cost measures must be made in the determination of depreciation charges and consequent income.

Stated in another way, the problem of depreciation in profit determination involves a choice between two concepts of capital—the one physical, the other monetary. Profit cannot be said to emerge until there has been a recovery of capital consumed; but should this capital recovery be stated in monetary terms or in terms of physical capacity?

Traditional accounting practice has answered this question by charging depreciation in terms of purchase costs. Such action is based either on the view that changes in technology and prices in our economy are moderate enough so that depreciation charged on an original cost basis yields a reasonably satisfactory estimate of the current cost of physical capacity utilized or on the notion that profit should be recognized once there has been a recovery of monetary capital. Before recommending a shift from this traditional accounting view, the relative usefulness of the two profits figures must be considered as well as the technical problems of effecting a change to current cost depreciation.

DEPRECIATION IN VARIOUS PROFITS CONTEXTS

Reported business profits figures are considered in a variety of contexts. At one moment they may contribute to guiding the allocation of resources; then they may be used to indicate the growth in free corporate funds; presently they may serve in computing the firm's tax liability; national income measurement requires an aggregate business profits figure; this figure may also be used to indicate, for a variety of purposes, the distributive share going to profits recipients. For each of these uses of profits figures, a comparison of the relative appropriateness of the two depreciation valuation methods, upon which profits depend in some measure, is desirable.

ALLOCATION OF RESOURCES

With regard to the allocation of resources as it affects capital assets, there are two major questions to be answered. What use shall be made of existing capital assets and what portion of the economy's productive effort should be devoted to turning out new capital assets in each area of production? To the extent that profit calculations aid in the answering of these questions, a profit figure reached after deducting current cost depreciation would be the more useful.

Decisions as to the use of existing capital assets should be reached independent of depreciation calculations. Such "sunk" assets should, of course, be used in such a way as to maximize the present value of the differences between revenue and variable[3] cost over their remaining service lives. Considering the multitude of alternatives to be considered and decisions to be reached, it is likely that many questions of capital asset allocation are answered by simpler solutions. Many enterprisers probably consult their cost compilations and

serious because of the much shorter time that inventories are held. However, because of the greater importance of materials and merchandise cost in the total of costs, the inventory correction may be of greater quantitative importance. The last-in, first-out (LIFO) basis of assumed inventory flow serves to state materials cost more nearly in current terms.

The problem of inventory adjustments justifies much broader attention than can be given to it in this short paper on depreciation policy.

[3] Where a "production" method of apportioning depreciation rather than the "straight line" method is used, at least a part of depreciation charges becomes a variable cost. In the case of the United States Steel Corporation, an example discussed in detail below, depreciation charges will affect variable costs.

reported profits; if these figures indicate a "reasonable" profit is being earned, alternative asset uses will probably not be considered. In these rough decisions it is important that current costs of plant assets and depreciation charges based upon them be considered rather than recorded purchase costs.

Calculations of present profits have only an indirect effect on capital formation decisions also. Investment is determined by the prospects for future profits, but such prospects are merely a balancing of subjective anticipations. Current reported profits figures probably rank high in the list of factors influencing these anticipations. To the extent that fluctuations in reported profits figures are accentuated by charging depreciation on original costs, the result may be too much capital formation in periods of rising prices and too little when prices are moving in the other direction.

Viewing high reported profits as a mandate for expansion, businessmen may seek to bid more resources away from immediate consumption uses than they would if depreciation were stated on a current cost basis and profits were consequently lower. From the view of consumer preferences, it seems likely that there has been too much capital formation in the post-war years and depreciation charges on an initial cost basis with the resulting high stated profits were probably one of the causal factors in this. Conversely, in periods of low or declining prices when the opportunity costs of capital formation are normally extremely low because of idle resources, reported losses may increase pessimism and prevent socially inexpensive capital formation. However, if all costs were charged on a current basis, the business would be shown to have moved into a satisfactory profit position sooner than if "high cost" depreciation were continued. In this way a wiser use of resources in periods of low prices might also be encouraged.

This argument concerning allocation of resources is sometimes expressed in terms of helping to reduce cyclical fluctuations. To the extent that capital outlays in periods of boom might be limited and investment encouraged sooner in the depression phase of the cycle, reporting profits on a current cost basis would tend to promote greater stability in the level of economic activity.

Two limitations to these views should be noted. Investment decisions should be made in terms of future profits prospects and it is not certain how much weight is given to present profit figures in determining these prospects. Secondly, with the wide publicity given this question, it is likely that a substantial group of those making investment decisions adjust present reported profit levels for this factor. Even with these limitations considered, it is likely that stating profits on a current cost basis, to the extent that it affects resource allocation, would result in a wiser allocation of resources.

GROWTH OF AVAILABLE FUNDS

Profits are also viewed in the context of indicating the growth of funds available for unrestricted corporate use. Since there is no necessary connection between periodic depreciation charges and the need for acquisition of new capital assets, and the replacement of assets requires a specific decision to invest, the view of growth funds available for free corporate use should be broadened to include depreciation charges as well as reported profits in the total.[4] The

[4] Three possible exceptions to this statement should be recognized. While charging depreciation does not provide funds, funds are made available in the amount of depreciation charges if revenues are sufficient to cover all costs. If operations result in a loss, the decrease in available funds equals the loss minus depreciation charges.

For firms with low or negative legal earned surplus balances, funds made available by depreciation charges probably could not be used for dividend payments.

The total of profits and depreciation cost recoveries

question here becomes one of considering the effect of the depreciation methods on the availability of funds.

It should first be emphasized that the charging of depreciation, or the recording of any other cost for that matter, does not normally provide the firm with funds. Only in the rare case of a cost plus contract will entries in the accounting records give rise to receipts by the firm. In the overwhelming majority of cases, funds are provided solely by sales to customers on the open market. It is necessary to find willing buyers at the market price before revenues are produced; simply making entries in the account records will not suffice.

It may be asked, however, if the charges for depreciation do not affect the amount of funds available through their effect on selling prices. That is, if sufficient depreciation to cover current costs were recorded, then selling prices, if they were to cover all costs and yield the same profit, would have to be higher. The higher the selling price, the higher total receipts would be, the argument continues. Even laying aside all consideration of demand elasticities, such a view of price determination is inappropriate. This is true if we assume that short run pricing seeks to maximize profits by equating marginal revenue and marginal cost or if we more realistically assume that maximization of profits is sought by a pricing scheme that proceeds by some mystic rule of thumb. In the former case, marginal costs are usually unaffected by the amount of depreciation charges. In rule-of-thumb price determination, prices are usually set up by applying a percentage mark up to direct costs or some portion of them, rather than seeking to add a net profit figure to total costs. How prices realistically come to be what they are is a problem deserving of considerable future study. Such study is likely to emphasize further the fact that depreciation recording has little, if any, effect on short run pricing.

If this is the case, the amount of funds available for unrestricted corporate use will be unaffected by the depreciation valuation method adopted.[5] The relative size of the profits and depreciation components of the growth of funds total will be affected, but funds freely available for use will remain the same.

Business management, with large amounts of funds made available from current operations, finds itself under pressure from various groups—consumers seeking lower prices, workers demanding higher wages, government threatening heavier taxes, stockholders seeking larger dividends, and its own technical and sales staffs seeking renewal and expansion of productive plant and equipment. To the extent that it can be shown that funds have been made available from capital consumption rather than from profitable operation, the more easily will management be able to withstand the first four of these pressures and satisfy the last one.

This problem, however, is one of administering available funds rather than one of determining profit. Its solution depends upon educating all interested groups in the problems brought to the corporation, as well as the individual, by an advancing price level.

INDICATOR OF TAXABLE INCOME

The taxable income context is another important area of use of profit figures.

is not matched by an increase in the firm's disposable cash balance, for all during the period the firm may have been altering the total of its noncash resources. During periods of rising prices, maintenance of physical volume of production will probably require larger dollar balances in inventories and receivables. This exception points up the importance of presenting a sources and applications of funds statement along with the traditional income statement and balance sheet.

[5] An exception to this statement arises from income tax considerations. If current cost depreciation were permitted for tax purposes, tax charges would differ from those calculated under present methods. Since tax costs give rise to cash outflows, the amount of available funds would be affected by the difference between tax costs under the two depreciation methods.

Here again, the question is whether the deduction of current cost depreciation would provide a more useful taxable income figure than the one now provided by viewing purchase cost depreciation as a business expense.

A survey of the applicable regulations indicates that the income tax is based entirely on a money income philosophy. Consideration of changes in real position is nowhere provided. As a hundred dollar Series E bond matures, the twenty-five dollar difference between redemption and purchase prices is viewed as income even though the hundred dollars will buy fewer goods than could have been purchased with the seventy-five dollars at the moment the bond was purchased. Similarly, there is no cost of living adjustment for personal exemptions nor is the real gain from having debt securities outstanding in periods of price rise or the real loss from holding cash items considered.

If depreciation at current cost figures were permitted as a deduction, other adjustments for price level change would logically also be required. A broader revision of tax theory than merely altering the depreciation provision is thus being considered. Whatever the desirability of such action on income-theory grounds might be, it is more than offset, unless price level changes are cataclysmic, by the practical difficulties in collection and enforcement procedure it would introduce. Just the depreciation adjustment would raise the difficult technical problems considered in the second major section of this paper—what sort of an index to use and what effect to be given to technological change.

The cyclical effects of such a tax view of depreciation should also be considered. At a time when increasing built-in flexibility is an important criterion in tax policy, permitting current cost depreciation would be a move in the opposite direction. As compared with present regulations, such an expense deduction would result in lower tax payments in periods of rising prices and higher taxes in periods of falling prices. To the extent that we associate periods of rising prices with high levels of economic activity and falling prices with declining economic activity, such a tax view of profits would reduce the amount of built-in flexibility in the corporate profits tax. Such an effect would offset, at least in part, some of the gains of a shift to current cost depreciation considered under allocation of resources. There the possibly counter-cyclical effect on capital formation through influencing business psychology was considered. Further study would be required to determine whether the loss in built-in flexibility would have a greater or lesser cyclical effect than the possible change in business attitudes that might be produced.

NATIONAL INCOME MEASUREMENT

For purposes of national income measurement it is clear that the current cost of capital consumption is the proper depreciation deduction to make. If we seek a measure of net national income produced, there must be a subtraction from gross national product for capital consumption in terms of dollars of the same vintage as those used to state gross national product.

That part of reported business income made up of the difference between depreciation on a current cost basis as opposed to an original cost basis represents a capital gain or loss that has been realized piecemeal by charges to customers.[6] Using cur-

[6] In connection with the taxation aspect of profits, there are strong arguments for adopting a middle course. A current cost depreciation deduction would be permitted in determining operating profits, and the difference between original and current cost depreciation each year would be treated as a capital gain of the period. Since the maximum rate on capital gains is 25% as opposed to a 38% rate on operating income, some firms might benefit substantially from the adoption of such a view. Enforcement difficulties stemming from the difficulty of determining current cost depreciation would again militate against such an adoption, however.

rent cost depreciation in the national income statistics merely marks an extension of the effort to exclude capital gains and losses from the data. Such exclusion is, of course, necessary if national income is to measure current output of commodities and services.

The National Bureau of Economic Research in its income studies[7] converted depreciation to current cost terms. The Department of Commerce agrees that "such restatement [of depreciation to a current cost basis] is indicated on conceptual grounds.[8] However, it does not attempt the adjustment, because of the technical difficulties involved.

STATEMENT OF DISTRIBUTIVE SHARE

There remains the question of which view of depreciation is appropriate when comparisons of distributive shares are being made. Profit recipients may be compared with those who invested in cash balances or fixed debt securities, and those who had no capital to invest and thus received only wage and salary income.

In periods of rising prices, the real earning power of the fixed debt balances held, of course, drops. Charging depreciation on a current cost basis, on the other hand, tends to have the effect of reporting profits only after provision for maintaining real earning power has been made. In comparing interest with profits, there is thus an inconsistency between viewing dollars of interest received as opposed to dollars of profits earned after deducting depreciation on a current cost basis. A more consistent comparison would be furnished if only an original cost depreciation estimate were included in expenses. However, a more realistic means of comparison, especially if wage earners are also to be included, would seem to be provided by profits, after current cost depreciation, and interest received, after deducting the real capital loss that has been suffered as a result of the decline in the present value of future real income to be derived from the contract.

TABLE I

NATIONAL INCOME BY DISTRIBUTIVE SHARES

Distributive Share	Base Periods		Later Periods			
	Profits equal on both depreciation methods		Profits calculated with depreciation based on			
			Initial Cost		Current Cost	
	Per Cent	Billions of Dollars	Per Cent	Billions of Dollars	Per Cent	Billions of Dollars
Profits	25	25	28	42	24	34
Compensation of employees	75	75	72	108	76	108
Total	100	100	100	150	100	142

In comparing profits with wages, it is useful to employ a simplified model which views profits and compensation of employees as the only distributive shares of the national income. If we assume a base period which follows a long period of stable prices and unchanging technology, profits after deducting current cost depreciation are approximately equal to those determined with an original cost depreciation deduction. Let this profits figure be 25% of national income, and compensation of employees equal 75% of national income. After a period of rapid change in

[7] See, Solomon Fabricant, *Capital Consumption and Adjustment*, Bureau Publication Number 35 (1938) and Simon Kuznets, *National Income and Its Composition*, Bureau Publication Number 40 (1941).

[8] *Survey of Current Business, National Income Supplement*, July, 1947, p. 11.

prices and economic activity, but no alteration in the production function, assume profits, after deduction of initial cost depreciation, to make up 28% of national income. However, if business profits were computed by inclusion of a current cost depreciation charge, they might make up only 24% of national income. The percentages, with dollar figures added, are set forth in Table I above. Under such circumstances, what may be said of the shares going to the two groups?

Viewing the profit figure after depreciation on an initial cost basis, the relative share going to profits recipients has increased. However, this seeming increase has been secured at the expense of future shares in the national income. Initial cost depreciation theory views profits as accruing after dollar capital has been maintained, but future earning potential, in the sense of share of the national income, depends upon physical capacity. With an advancing price level and stable technology, maintenance of dollar capital means a reduction of physical capacity and, other things including labor supply remaining equal, an inability to maintain the former share of the national income. Dollar earnings might be expected to remain unchanged, but they would represent a smaller portion of the national income total. Maintenance of the share of the national income going to profits receivers is dependent, in the absence of other charges, on the maintenance of physical capacity. For that reason a current cost view of depreciation would seem preferable for continuing analysis of national income by distributive shares.

TECHNICAL PROBLEMS OF CURRENT COST DEPRECIATION CHARGES

Having considered the relative usefulness of the two depreciation methods in various profits contexts, there remains the question of which depreciation figure can more effectively and more objectively be stated. Since the present method of measuring depreciation has often been described, this section will devote major attention to the problem of how current-cost depreciation charges can be measured.

The problem of measuring depreciation has both physical and valuation aspects. In physical terms, the problem is one of dividing the estimated total of services the capital asset will render into the smaller bundles of services attributable to each accounting period. These annual service bundles must then be valued in order to determine the depreciation charge for the period.

A necessary first step under either sort of depreciation valuation is thus the determination of the economic service life consumed within the annual period. This figure is usually expressed as a percentage of estimated services to be rendered by the asset over its life. Such estimates of total economic life must take cognizance of the limiting effects of physical deterioration and obsolescence. The estimates of both the destructive effects of use and anticipated technological change present difficult problems and revision of estimates in later years of life may often be necessary. Relying on substantial compilations of economic lives that have been built up, these estimates have been reasonably satisfactory, although occasional individual life estimates will turn out to be in substantial error.

Most business firms make these estimates in terms of years of service life and then utilize the straight line method of distributing asset cost to annual periods. This method assigns equal portions of economic usefulness to each year without regard to a time discounting of services to be received in future years or to fluctuations in output. In an economy characterized by cyclical variations in production, the latter omission may be a serious

one.[9] To the extent that operations in recent years have been carried on at above "normal" rates, straight line depreciation has yielded lower charges than would have been produced if an output method of calculating depreciation were in use. Conversely, such a method in the 1930's would have yielded smaller annual charges. The chief difficulty in utilizing the output method comes in calculating economic life. An estimate would, of course, have to be made of total units of output to be derived from the machine over its life. An estimate in terms of years is much more readily and accurately made. This is an important factor in explaining the general use of the straight line method, although output methods or some combination of time and output methods are being used to a growing extent. "Accelerated depreciation during years of greatest economic usefulness" is a phrase appearing in an increasing number of corporate reports.

After the annual physical expiration has been determined, there remains the problem of placing a dollar figure on this capital consumption. Traditional accounting practice has valued depreciation in terms of purchase cost. That is, if a building cost $200,000 fourteen years ago and is estimated to have a forty year life, one fortieth of the original cost, or $5,000 would be this year's depreciation charge, without regard to the changes in cost of such buildings that may have occurred since its construction date.

To place depreciation on a truly current cost basis, depreciation charges would have to state the present cost of replacing the service capacity utilized in production. In periods of stable prices and unchanging technology such charges would be the same as those calculated by the traditional depreciation method. A change in either of these factors—prices or technology—would cause a divergence between the depreciation charges indicated by the two methods. The problems of and procedures for giving effect to these changes are considered below.

RECORDING EFFECT OF PRICE CHANGES

If for a moment we assume unchanging technology, current cost depreciation would reflect the expired replacement cost of present plant assets used. These replacement cost figures would be provided by applying appropriate index number series to the dollars of recorded cost.[10] Securing of appropriate index numbers constitutes a major problem. Since the question is one of maintaining a pool of productive capital, the better known general purchasing power indexes are not suitable. Indexes of cost of the assets to be revalued are required to do the job properly. Since there are differences in the rate of change of price of each type of asset and also within types, as well as differences between regions, the indexes should be specific. For example, an index series of the cost of steel and concrete buildings in St. Louis extending back to the date of construction of the building is required in order to revalue such an asset so located. It is doubtful whether adequate and accurate indexes of this sort for all types of capital assets are available today. It would be possible to use general indexes of construction and equipment cost for the conversion, but even in this broader area there is no generally accepted index. This does not doom the altered depreciation method, but it does indicate that there are practical difficulties in connection with its immediate adoption.

Continuing the assumption of a con-

[9] The importance of this distinction depends on the extent to which depreciation is related to use rather than merely passage of time.

[10] Replacement cost could, of course, also be determined by the appraisal process. This is normally so time consuming and expensive as to be out of the question for this purpose.

stant technology and assuming that current replacement cost can be determined, what sort of accounting entries would be required to give effect to the stating of depreciation in current terms? Every accounting transaction has two aspects, which gives rise to the familiar tautology that debits equal credits. In the case of depreciation, recognition of an expense must be matched by an asset expiration. The depreciation charge on an original cost basis is equal to the reduction in the dollars of undepreciated original cost recorded in the books. If depreciation on a current cost basis exceeds that on an original cost basis, it is necessary to find an appropriate asset expiration to match that excess. Several alternative proposals have been put forth for meeting that necessity.

One plan, followed by National Steel Corporation and Republic Steel Corporation,[11] provided for matching the entire current cost depreciation charge by a credit to the original cost recorded for the capital asset. What happens after the accumulated credits equal the recorded cost of the asset has not been explained by the proponents of such a plan. If depreciation on the fully depreciated asset continues, the problem of finding an account for the matching credit is faced anew. If depreciation charges stop although the asset continues in use, expenses in later years would be understated by the entire annual expiration of economic usefulness. The figure shown on the balance sheet for capital assets would have even less relation to current market price reality than that shown under traditional methods, yet it would not show, as the traditional method does, the portion of original dollars of expenditure still deemed to have economic significance. On both income sheet and balance sheet considerations, this proposal is objectionable.

A second suggestion retains the original costs on the books and annually reduces that recorded value only by the amount of depreciation on original cost. The excess of current cost depreciation over that on original cost is viewed as, and credited to, a realized capital gain, or a reserve for replacement.[12] Such a procedure would result in total depreciation charges being unrelated to book figures. Accountants properly seek to have the firm's affairs described by an integrated, consistent system of records, and this plan does not relate depreciation to any figure in the records.

A third possibility suggests the substituting of present values of plant assets for recorded costs and recognizing a capital adjustment in the amount of the total difference between present value and recorded cost. The adjustment could be recorded in supplementary plant and capital asset accounts or by a thoroughgoing quasi-reorganization.[13] Current depreciation would then be matched by credits to this new value of capital assets. If there were but one sudden sharp change in prices, such a procedure might not be too objectionable. However, under conditions of creeping inflation or deflation, the balance sheet would resemble a jumping jack as it attempted to reflect the constantly changing present values.

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[11] See the 1947 Annual Reports of the two firms. In the 1948 Reports, this method was discontinued and accelerated depreciation substituted.

[12] The realized capital gain proposal is put forth by Graham in the article cited above. The capital gain is of course, realized only if revenues are sufficient to cover all costs of operation, including depreciation on a current cost basis.

Credits to a replacement reserve were made in the 1947 Annual Reports of The Timken Roller Bearing Corporation and the United States Steel Corporation, among others. The precise nature of these reserves is nowhere revealed; in the balance sheets they are included in the "never-never land" between liabilities and ownership equity.

[13] No examples of corporate utilization of this third proposal are known to the author. The method is suggested by Paton in the article cited above. H. E. Miller, "Quasi-Reorganizations in Reverse," ACCOUNTING REVIEW, April, 1948, p. 154, outlines the necessary conditions for such a quasi-reorganization.

The capital gain that would be recognized under the last two methods has its unusual features. Capital gains are usually associated with a disposition of asset holdings. Yet the first goal of most firms is survival. This, at a minimum, usually means maintenance of productive capacity. To retain productive capacity in a period of advancing prices will customarily require the utilization of these realized capital gains plus reinvestment of some portion of reported profits.

The capital gain thus recognized may further be analyzed to determine to what extent it represents real gain, nominal gain, or real loss. This involves distinguishing between changes occasioned by a shift in the standard of value as opposed to changes in value. If the specific indexes for capital assets of this firm have risen more rapidly than a general index of prices, the capital gain is in part real, in part nominal. Where the specific index has risen less sharply than the general level of prices, the reported capital gain will be composed of elements of nominal gain and real loss. Although adjustments that merely maintain purchasing power position are spoken of as nominal gains, the firm is, of course, better off for having secured them. If cash rather than plant assets had been held, the entire change in prices would have given rise to a real loss. Until accounting stands ready to recognize all aspects of gain or loss occasioned by an unstable standard of value, classification of the capital gain into real and nominal elements is unlikely to be attempted.

The serious technical difficulties of recording as well as the non-availability of dependable index series help to explain the lack of enthusiasm among professional accountants for a change to current cost depreciation. The American Institute of Accountants, speaking through its Committee on Accounting Procedure has said: "It has been suggested in some quarters that the problem be met by increasing depreciation charges against current income. The Committee does not believe that this is a satisfactory solution at this time. It believes that accounting and financial reporting for general use will best serve their purposes by adhering to the generally accepted concept of depreciation on cost, at least until the dollar is stabilized at some level. An attempt to recognize current prices in providing depreciation, to be consistent, would require the serious step of formally recording appraised current values for all properties, and continuous and consistent depreciation charges based on the new values. Without such formal steps, there would be no objective standard by which to judge the propriety of the amounts of depreciation charges against current income, and the significance of recorded amounts of profit might be seriously impaired.[14]

Despite the recommendations of this accounting policy group, some firms adjusted their 1947 depreciation expense charges to reflect present high price levels. The auditor's reports in almost all cases took exception to such policy. After further study, the American Institute of Accountants reaffirmed its earlier statement opposing depreciation adjustment in October, 1948.[15] The Securities and Exchange Commission supported the Institute in its stand.[16] As a result, almost all firms have returned to a policy of basing depreciation on initial cost of plant assets. The United States Steel Corporation in its 1948 annual report, after defending its earlier practice, said, "However, in view of the

[14] American Institute of Accountants, Accounting Research Bulletin No. 33, "Depreciation and High Costs," December, 1947.

[15] Letter from the Committee on Accounting Procedure of the American Institute of Accountants to the members of the American Institute of Accountants, dated October 14, 1948.

[16] The Commission has not issued a formal statement on this subject, but several annual reports, cf. United States Steel and National Steel for 1948, cite the Commission's support of the Institute.

disagreement existing among accountants, both public and private, and the stated position of the American Institute of Accountants, which is supported by the Securities and Exchange Commission, that the only accepted accounting principle for determining depreciation is that which is related to the actual number of dollars spent for facilities, regardless of when or of what buying power, United States Steel has adopted a method of accelerated depreciation on cost instead of one based on purchasing power recovery." The Chrysler Corporation in an amended 1947 report submitted to the Securities and Exchange Commission commented, "The major change is the adoption with respect to post-war additions to facilities of a policy of accelerated depreciation on cost in the early years when the economic usefulness of the facilities is greatest."

Accelerated depreciation is an accepted accounting practice and one that is economically sound, provided the acceleration is related to economic use. The United States Steel acceleration plan is related to a comparison of current operating rates with long-range average rates. The Chrysler report speaks of acceleration "in the early years when the economic usefulness of the facilities is greatest," but offers no further explanation. It is an amazing coincidence that when Chyrsler shifted its acceleration basis from that of amortizing the excess of present costs over pre-war costs to one recognizing greater economic usefulness in early years there was no change in the amount of depreciation charged.

As a result of the action of the American Institute of Accountants and the Securities and Exchange Commission, efforts to recognize current prices in depreciation have largely been diverted to adoptions of some sort of use measure of physical consumption in place of a rigid straight line measure. This has been true even though the technological aspect of current cost charges has been largely disregarded.

RECORDING EFFECTS OF TECHNICAL CHANGE

To place depreciation charges on a truly current basis would require the charges to state the current price of replacing the productive capacity utilized during the year. In the discussion of higher prices, an unchanging technology was assumed. Fortunately for our economy such an assumption does not hold true. Research and inventive genius result in constant technological progress. The pace of the advance may vary from year to year but it never ceases.

Technological progress with respect to plant assets necessarily means an increase in the physical productivity of a dollar's worth of plant assets. Altering the variable, it means that the same productive capacity could be secured with a smaller dollar outlay than was necessary in an earlier period.

The TNEC studies gave ample evidence of the effect of this sort of technological progress. During the period of relatively stable prices of the twenties, many corporations were able to increase the productive capacity of their plants at the same time that the number of dollars invested in plant assets was declining.

Such technical change would have an important effect on depreciation charges stated on a current cost basis. Assuming prices remained unchanged,[17] it would mean that the depreciation charges over the life of an asset would never equal its original cost. Prices may move in either direction, but technical change in this sense can only take the form of more productive machines. Each year in which technical progress in this type of equipment occurred, a given machine would have a lower depreciation charge.

[17] The assumption is maintained throughout this section on technological change.

Attempts to reflect continuously such decreased costs of productive capacity in the books of record are foredoomed to failure. There are no indexes seeking to measure this increased productivity per dollar of investment in general use. It is unlikely that any such index for specific items of equipment will ever be constructed. A painstaking appraisal of all of the firm's plant as compared with more modern less costly equivalent capacity would be required. When the reduction in capacity costs is determined, an entry would be made reducing the original cost of plant on the books and also recognizing the "capital loss" that has occurred. The current depreciation charge would then be an appropriate share of the book figure for current capacity cost.

It is unlikely that examples of applications of this aspect of depreciation as a current cost can be found in published business reports. Yet if depreciation is to be placed on a current cost basis, if true net income, which does not emerge until provision for maintenance of physical capacity has been made, is to be reported, attention must be devoted to both technical changes and price changes for plant assets.

FUTURE ACCOUNTING POLICY

A review of the various aspects of profit figures indicates that depreciation based on current cost is slightly to be preferred in most, though not all, profits contexts. Technical considerations indicate substantial difficulties in having corporate records and reports reflect current cost depreciation. Original cost, though it may lose much of its economic significance in periods of rapid price change, remains an objectively determinable fact. If public confidence in published statements is to be maintained, as much use as possible must be made of such objective data. The problem becomes one of determining how much of this basic data can be utilized, without impairing the basic usefulness of the reports.

Where price movements are of a moderate sort, the technical difficulties of making the transition and the increased uncertainty concerning the relative accuracy of the depreciation figure indicate that current cost depreciation should not be reflected in the formal records of the firm. However, a broadening of statement presentation should be attempted by the firm's accountants.

At a minimum, management should be supplied with supplementary cost data which reflect current cost depreciation whenever allocation decisions are to be made. For many firms with relatively important depreciation costs, the traditional income statement should be supplemented by a *pro forma* statement indicating what profit would have been if depreciation on a current cost basis had been charged. The *pro forma* statement should be prefaced by a frank admission that it is based on changes in prices and technology which are extremely difficult to measure and interpret.

There is also need for a general use of a sources and applications of funds statement to supplement the traditional statements. Such statements would help to emphasize the difference between reported profits and funds freely available for use, both before and after the firm's productive position has been maintained.

For purposes of distributive share analysis, adjustment of purchase cost depreciation on an economy-wide basis would be satisfactory. A generalized index of capacity cost changes would be satisfactory for this purpose, even though it could not be realistically applied to an individual firm.

With the use of such additional statements and adjustments, reporting of income on a maintenance of monetary-capital basis would be satisfactory for fairly broad shifts in price levels or tech-

nology. However, if a cataclysmic price level change took place, monetary capital expirations would become an unsatisfactory measure of the current cost of equivalent productive capacity used, even though supplemented by explanatory statements. This eventuality is limited to an inflationary situation, because it is unlikely that any technical development would produce a change of such magnitude in the cost of productive capacity.

Such a change would require a restating of plant assets of all firms; for only a part of the economy to make the change would destroy completely the comparability of profit figures. The difficulty and confusion of the revaluation process are so great that a single restatement of capacity costs in terms of price levels that are expected to persist for the future is probably all that could be attempted. An unrealized capital gain would be recognized in an amount equal to the write up of plant assets. Depreciation would then be valued in these restated cost terms. Each year of remaining life of the revalued assets, profits from operations after such depreciation charges would be supplemented by that portion of the capital gain that has been realized through charging higher depreciation charges to operators.

The core of the current discussion relates then, to the question of whether prices of productive capacity have advanced sufficiently to make such a thoroughgoing revision necessary. Considering the technical accounting problems involved, the difficulties of forecasting a price level that is likely to persist, and the legal and institutional obstacles to be overcome, the present moment does not appear to be a propitious one for such a change.

REPORTS FOR CREDITORS*

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Creditors are those individuals or business organizations which deliver goods, wares, or services, or who lend their money, to a debtor in exchange for a promise to pay at some time in the future. It might well be asked what it is that persuades the owner of goods, wares, or money to exchange them for a promise of a future payment. The two primary factors that induce one to become a creditor are the desire to lend at or sell for a profit, and confidence in the debtor's ability to meet his promise of future payment.

The creditor's confidence in receiving payment in the future is based upon the history, reputation, and character of the debtor, supported by adequate accounting reports. Accounting reports are the creditor's principal tool, although not his only one. From the creditor's viewpoint the term "accounting reports" should be regarded in its broadest sense. They consist of reports of independent accountants, reports of management to stockholders, and special financial and statistical analyses. These reports are not necessarily different than those furnished to other groups, such as stockholders, security analysts, etc., but on the contrary will often be found to be the same. The factor which distinguishes the creditor from the stockholder or other groups is primarily the use to which he puts the reports, and the approach he takes to becoming or continuing to be a creditor.

It is difficult to generalize regarding reports for creditors because there are different types of creditors whose interests vary with the kind of credit being granted. This indicates the desirability of discussing the various kinds of creditors and showing how their interests differ or coincide. From this it may be possible to outline the general requirements of creditors in accounting reports.

Creditors can probably be classified into three broad groups. First would be trade creditors, who sell merchandise, materials or services to the debtor. The principal characteristic of this group of creditors is that the extension of credit is continually being repeated as new goods or services are delivered and previous deliveries are paid for by the debtor. Secondly, comes the bank creditor, who lends money to the debtor on an institutional basis for more or less short periods. Bank creditors advance a given amount of money for a fixed period of time, but the process is not usually continuing or repeating as in the case of trade creditors. The third class of creditors is security holders, who lend money to the debtor for a long period of time. This is a continuous non-repeating transaction.

If we examine the position of each of these groups we can determine their primary interests and their approach to the extension of credit. From this it should be possible to determine what are the factors in accounting and other reports which they emphasize.

Trade creditors sell their goods or services on a day-to-day or month-to-month basis. Their terms of sale, which fix the time for payment, are usually not longer than 30 days, although occasionally the time factor may run to 60 or 90 days. Their interest is, therefore, a relatively short range one. Because of this, they are more interested in the immediate financial position of the debtor and will base their judgment of the soundness of the credit

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on the probable flow of cash through the debtor's business, the working capital and short range debt position of the debtor, and they will give only secondary consideration to long term indebtedness and earning capacity. The trade creditor's risk is usually relatively small and can be reasonably well controlled by a refusal to deliver new goods. Therefore, the trade creditor has much flexibility in determining the risk assumed.

Bank creditors are usually in much the same situation as trade creditors. The extension of credit by banks may run up to a year in the typical seasonal or temporary financing and, therefore, the interest of the banks is somewhat longer from a time standpoint than that of typical trade creditors. Accordingly, their risk is greater and they have an interest in more information regarding the debtor's position. The working capital protection indicated by the debtor's financial position is often of greater importance to the bank than to the trade creditor, as is the debtor's earning capacity. However, a short term bank creditor is more concerned about asset protection than about earning capacity because he expects to be repaid by means of a turnover or liquidation of assets. Because bank creditors take a position covering a longer period than trade creditors, they do not have quite the flexibility that trade creditors do in controlling the amount of their exposure. This is because once they have made a loan they are not likely to be able to do anything about it until it matures, and sometimes not even then. These remarks regarding bank creditors do not apply, of course, to the longer term loans, which are those having a maturity of over a year and up to ten years. In such cases the banker is in the same position as the third type of creditor, which is the security holder.

Security holders are in a much different position than short-term bank or trade creditors. Their credit extension runs over a long period and the position they take is one which is not usually changed easily. The proceeds of their loan are often used to expand—either to add substantially to plant and equipment, or to permanent working capital. For this reason security holders do not depend for repayment upon asset turnover. Their primary protection is the earning capacity of the debtor—working capital and cash flow through the debtor's business are of secondary importance. Security holders have a greater risk and depend more upon the long range rather than the short range outlook.

This limited description of the various types of creditors indicates, I think a differential in risk. This makes for a diversity of interest as between the creditors, and it will be noted that this is a product of the time factor, that is, how far into the future payment is deferred. It will be seen, however, that all creditors have common interests. These interests are in the debtor's asset and working capital position and earning capacity. The difference between creditors is primarily a difference in the emphasis on these factors.

In view of the fact that all creditors have a common interest in a debtor's asset condition, working capital position, and earning capacity, it seems obvious that reports for creditors taken as a group should consist of reasonably detailed exhibits of assets and liabilities and reasonably detailed income reports. Such a statement no doubt sounds trite to you ladies and gentlemen who spend all of your time preaching the desirability of these very elementary things, but the fact is that creditors or prospective creditors often have difficulty with them.

It might be interesting, before examining further the creditor's need for reports, to point out the factors which influence the creditor's judgment, and which may condition the type of reports required, but

which at the same time might not necessarily be associated with the term "accounting reports."

One of these factors is the mere size of the debtor. If the debtor is a very large enterprise, it is probable that past operations have been successful. It is also probable that too much detail would be useless because there would likely be a great diversity of operation and great difficulty on the part of the creditor in interpreting too much detailed information. In such cases the creditor must base his decision on summarized information and must rely more on a large management organization to keep the business under control. Such factors as the quality of receivables and the quantity and condition of inventory in such cases have to be taken more or less for granted by the creditor unless there are indications that these problems are not receiving proper attention.

On the other hand, if the debtor is a relatively small business, it is probable that there is less diversity in operation. It is also probable that the management organization is smaller and may not contain as much top-grade talent as would be found in the large management organization. For this reason, the creditor frequently needs more detailed information regarding the position of the smaller debtor.

Another factor is the general credit standing of the debtor in the business community. Strangely enough, if the generally held opinion of the credit is highly favorable, creditors frequently require less information. This is probably because of the confidence factor.

A third element in a creditor's judgment relates to the intangible factors in the debtor's situation, such as labor relations, research and product development, and the general outlook for the industry, none of which can be thoroughly encompassed in an accounting report. These things must be investigated independently and may be influential in the creditor's final decision.

The line of business is also frequently of importance to the creditor. Certain types of business have peculiarities of their own and have a relatively high risk, as indicated by mortality figures for that particular line. In such cases the creditor needs a great deal more information than he does where the line of business is stable and has a low mortality rate.

I have pointed out these considerations in the creditor's judgment of a debtor's situation primarily to show that the creditor has to consider a great many factors other than accounting reports themselves. On the other hand, accounting reports are the basic tools of the creditor. These reports consist of the usual balance sheet, income statement, and surplus account. The creditor prefers to have these accompanied by the opinion of independent accountants of standing in the community because such an opinion insures that the reports are based upon accepted accounting principles; that accepted principles have been consistently applied; and that there is full disclosure of all pertinent facts bearing on the debtor's financial position. With such an opinion, the creditor is entitled to believe that the information he has to work with is reliable and that his judgment is not likely to be warped by incomplete factual data.

The creditor also likes to have from the larger debtors a report of the management to the stockholders which gives a review of operations, and usually contains remarks of general interest about the line of business and the outlook for the industry. While such reports may be opinionated, they at least express the belief of the management of the business itself toward the future.

While in the larger enterprises the creditor must necessarily rely upon accounting

summaries because of the size and complexity of the debtor's situation, in the smaller enterprises the creditor likes to have more detail. This normally is provided by the typical long form of accountant's report. This ordinarily will contain a reasonable amount of detail about accounts receivable, showing an analysis by billing dates, and pointing out any undue or unusual concentrations and explaining any major past due accounts. The long form of report will also contain some comment upon the inventories, indicating the valuation method used, and giving an analysis by finished product, in process materials, and raw materials. There will also be details of the fixed asset accounts and the valuations used, as well as comments upon commitments of a substantial character for the acquisition of additional fixed assets.

The creditor expects to find in the long form of report a reasonable breakdown of liabilities and in connection with the long term liabilities, a statement of covenants and restrictions, and whether there is any default on the part of the debtor. Also, this form of report will contain an analysis of the income accounts, showing the major categories of expense, cost of sales, etc.

In addition to the information provided by the good long form report, the creditor sometimes needs cash budgets and forecasts where it is indicated that large creditor commitments are required. Often statistical analyses of product sales and costs are also useful in judging the debtor's business and the creditor's risk. If, for any reason, the financial reports of the debtor are not accompanied by an independent accountant's opinion, then the same information should be furnished by the debtor.

Information of this general nature is needed by the creditor at least annually, but just as important is more condensed interim information which will enable the creditor to keep in close touch with the debtor's current position and progress.

Debtors frequently do not understand why creditors require so much information and the latter have often been accused of mere curiosity simply because the debtor did not understand the creditor's problems and approach to the granting of credit. The creditor only needs such information as will enable him to judge the soundness of the position he is being asked to take. His judgment depends largely upon his interpretation of the reports he gets from the debtor. This interpretation is by means of ratio analysis, which brings out the relationships between the various asset and liability accounts at the date of the statement. The experienced credit man knows that certain relationships are normal and when he finds a deviation from normal in a particular case it is an indication to him that further investigation may be necessary. Ratios over a period of years also indicate trends which tell the creditor whether he should continue his commitment or curtail or even expand it.

While a great deal has been written about the ratio analysis of financial statements, and while there are a great many financial statement ratios which can be computed, there are only a few ratios of importance. Briefly, these ratios and their significance are as follows:

1. *Turnover of Receivables*
   This is annual sales divided by outstanding receivables, and indicates the number of days or months of average sales on the debtor's books. When this is compared with the normal terms of sale it can usually be determined in a rough way whether there is any large amount of past due accounts on the debtor's books.
2. *Turnover of Inventory*
   The cost of sales divided by inventory indicates the rapidity with which ma-

terials are moving through the debtor's business. This will give a clue to whether the movement is about normal. If the turnover period seems unusually long, there is always the possibility that there is obsolete material on hand or that the inventory is unbalanced or is out of line with current sales.

3. *Cash and Receivables to Current Liabilities*
   This ratio indicates the liquidity of the business and the possibility of the debtor being able to meet his currently maturing liabilities and operating costs from his cash and currently collectible receivables.
4. *Current Debt to Working Capital*
   The amount of protection the current creditors are receiving from the invested working capital of the debtor is shown by this ratio.
5. *Total Debt to Working Capital*
   This is similar to the previous ratio, but indicates how much total debt has to be supported by existing working capital.
6. *Current Debt and Total Debt to Net Worth*
   These ratios indicate the proportion of total funds being supplied by creditors and owners.
7. *Net Profit to Sales*
   This shows whether there is much of a margin for the absorption of increased expenses or the shock of a downward movement in volume of business.
8. *Profit to Net Worth*
   This ratio points out the profitableness of the business and the effectiveness with which invested capital is being utilized.

The foregoing ratios are, in my opinion, the most important ones. It should always be remembered that these ratios vary a great deal between lines of business. For example, all of these ratios for a dairy company will be much different than those for a contracting company. The ratios for any one company must always be interpreted in view of the business of that company and compared with the ratios of other companies in the same line of business. For this reason, no standards or even ranges can be given for any of the ratios except by industry or line of business. To summarize, it can be said that there are different classes of creditors whose needs for information vary. But this variance is more in the emphasis on certain factors in the debtor's situation than it is in basic information. Creditors of all classes need the usual accounting reports accompanied by an opinion of reputable independent accountants and supported by management comments. While the creditor is not wholly dependent on accounting reports, and must of necessity consider other elements in the debtor's situation, such reports furnish the basic data with which the creditor works. In accounting reports, the creditor needs a sufficient amount of detail to enable him to make a ratio analysis because it is from this that he determines the degree of risk in the debtor's situation, the amount of protection available to him as a creditor, and whether or not he should assume a creditor's position.

LAST-IN, FIRST-OUT

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It is not inaccurate to state that since the passage of the Revenue Act of 1938 the concept of Lifo has elicited as much comment in the trade journals as any other single aspect of accounting. Much of the material presented, however, is repetitious; and the deeper significance of the problem, i.e., the determination of the most efficacious way of valuing assets on a consistent basis, appears to have been largely neglected.

A primary function of accounting is to provide entrepreneurs and other interested persons with useful data upon which to base their decisions. This objective can logically be attained best by valuing assets, whether consumed during the accounting period or not, in real terms, i.e., by adjusting their monetary expressions to changes in the general price-level. In the past, accountants, although admitting the validity of this proposition, have tended to advocate conservative or reactionary practices, such as the utilization of the "cost or market whichever is lower" method of inventory valuation, the over-rapid depreciation of equipment, and original cost, on the grounds that:

(1) There exist no adequate indexes for adjusting asset valuations.
(2) Frequent adjustments would open the way for manipulation by management.
(3) The entrepreneur is not responsible for price changes.
(4) It is the sole function of accountants to record objectively determined historical cost.
(5) Present values are not significant in the case of fixed assets; it is property off the market.
(6) Laws are interpreted on this basis.
(7) Other techniques are more expensive.
(8) If differences become too great, adjustments can be made through the medium of a quasi-reorganization.

The shift of emphasis from the balance sheet to the income statement during the preceding two decades has spotlighted the inherent fallaciousness of the doctrine of conservatism. The understatement of an asset in the balance sheet of one accounting period means an overstatement of profit in another period when the asset is physically consumed in the process of production. Despite a general recognition of the problem, many accountants continue to advocate such "conservative" practices for want of anything better.

One way of retaining conservatism in the balance sheet, and of avoiding the perils of profit overstatement, has been suggested by the proponents of the base-stock method and of Lifo, which seems to be little more than an attempt to rationalize the base-stock method. Few will deny that these techniques of inventory valuation are indicative of progressive thinking and that they embody certain advantages which will be discussed in the following sections. When they are applied literally, however, their inadequacy becomes apparent for they are concerned with the treatment of only a small fraction of the firm's total assets. The consequence of their utilization, therefore, is to render a "mixed" income statement which has little value to anyone; not to mention the resulting confusion in the balance sheet.[1]

A few articles in recent issues of the *Journal of Accountancy* suggest that Lifo is gradually being transformed into a generic term, the underlying thesis of

[1] This does not deny that in certain industries where raw material cost predominates and the consumption of fixed assets is small Lifo may be reasonably satisfactory.

which is that the value of assets held and the value at which resources are charged into the cost of production should be adjusted periodically in accordance with the changing general price-level, e.g., by the use of index numbers. Under such circumstances, it is believed that Lifo becomes a significant concept worthy of further development. The reason is obvious: by enabling businessmen to observe the consequences of their activities in "real" terms, the artificial monetary influence tends to be reduced with the overall result that business fluctuations might well be smoothed out in the long-run, thus contributing to increased predictability. The application of such a principle is difficult, but certainly worth attempting.

THE THEORETICAL BASIS FOR LIFO

As is the case with many innovations, the base-stock method (Lifo) was originally introduced in this country by enterprises such as the American Smelting and Refining Company and the National Lead Company to solve specific difficulties.[2] These problems centered in the existence of large raw material inventories whose prices, being sensitive, varied frequently. It was only gradually that the normal-stock technique (Lifo) was allowed to become a part of "generally accepted accounting principles."

A number of attempts at the rationalization of Lifo have been made, most of which avoid the basic issue.[3] The physical flow argument is obviously inadequate and needs no comment. The visualization of a certain minimum inventory as a fund or fixed investment to the going concern which is to be valued at the cost of the quantity originally purchased is a slightly more sophisticated approach. It would have added merit if prices tended to fluctuate in a cyclical fashion around a horizontal trend. Empirical observation suggests, however, that most prices move secularly in one direction or the other with the result that the valuation of inventories on this basis may be quite remote from reality. The fund concept, moreover, leaves little basis for classifying inventory as a current asset. Finally, its effect on the current asset total and on the current ratio cannot be neglected; both tend to be understated during periods of high prices.[4]

A vindication similar to that of the fund concept is that the inventory is to be regarded as a sum total of utility and that inventory replacements merely maintain the original stock of utility. Some theorists therefore conclude, if final inventory equals initial inventory, it should be reflected in the balance sheet at the cost of the utility quantity first obtained. This argument can be criticized in roughly the same fashion as the fund principle; moreover, to be valid it should be applied to all assets, rather than to inventories alone. It might also be said that, since assets are purchased at different times and at diverse price-levels, the utilization of actual costs as a yardstick of utility is subject to suspicion.

Recent theorizing has tended to approximate more closely the thinking of the firms who originally conceived the notion of base-stock (Lifo). One suggestion is that the use of Lifo permits a more accurate presentation of profits. Whether such is the case depends upon one's definition of profits. It is agreed that so-called capital gains or losses should be distinguished from operating income in the income statement if the purposes of management are to be best served. The elimination of capital gains, for instance, might indicate that

[2] Inasmuch as base-stock and Lifo are so similar, no attempt is made to distinguish between them.

[3] Cf. G. R. Husband, "Filo," ACCOUNTING REVIEW, June, 1940, pp. 190–196.

[4] It is frequently postulated that Lifo should be instituted only when prices are extremely low so that the value of the inventory will never exceed market value.

the investor would be better off in some other field. This admission, however, is quite different from advocating their complete omission from statements of income or of surplus. As many accountants have pointed out, Lifo, applied literally, provides for the creation of hidden reserves when prices are rising and for an overstatement of the asset position when prices fall below the original inventory valuation. It is also important to note that enterprises cannot hope to eliminate capital gains or losses from net operating income entirely by the use of Lifo.

Perhaps the most significant reason given for the adoption of Lifo is that which states that it results in a better correlation of sales and cost of goods sold. There is considerable merit to this theory, but Lifo—in a literal sense—appears to be only a partial corrective, even though it is one which may have considerable potency in a number of instances. It has nothing to say about the costing of fixed assets as they are consumed or about the accurateness of the balance sheet. If, and only if, Lifo can be conceived of as a theory for the adjustment of assets to changes in the general price-level will it become a significant addition to the accounting practice. In such a case, it would be proper to change the name of Lifo to one giving a better description of its function.

LIFO FOR TAX PURPOSES

There is some merit to the belief that the employment of the base-stock method (Lifo) would transform the annual accounting period into a prorated cyclical accounting period. The over-all validity of this proposition depends of course upon the secular price movement and upon whether assets other than inventories are, or can be, treated similarly. For present purposes, little need be said about the general meaningfulness of a cyclical accounting period, although it is apparent that the concept is severely limited because of the variability of the cycles' durations.

A related question, which is interesting and which has been frequently discussed by those concerned with both theoretical and practical phases of accounting, is that pertaining to the effect of base-stock (Lifo) on corporate income taxes. The a priori answer can perhaps be couched in terms of the long-run trend of prices; if upward, the enterprise gains in comparison to Fifo; if downward, it loses.[5] Other factors to be taken into account include the "progressiveness" of the tax and extensiveness of the carry-forward and carry-back provisions. It is apparent that, under conditions of a highly progressive tax, a firm penalizes itself unduly by utilizing valuation methods which tend to accentuate fluctuations of annual profits or losses.[6] On the other hand, taxes can generally be paid far more easily during periods of rising prices and favorable expectations than under depressed conditions, principally due to changes in credit availability.[7] Prior to the provision in the 1942 Revenue Act for the pairing off of losses incurred in one year against profits of another period, there was additional incentive to use techniques accomplishing de facto what the tax laws denied. The absence of any carry-forward and carry-back provision undoubtedly influenced many concerns to switch to Lifo after 1938.

The deductive reasoning applied above is not necessarily conclusive, although it appears to favor the use of Lifo for tax purposes. The fact that the tax rate may be altered by Congress at any time introduces a high degree of uncertainty as

[5] Constant tax rates are assumed temporarily.

[6] This is true, despite the fact that Fifo and Lifo may give identical results over the entire cycle.

[7] Cf. W. J. Fellner, *Monetary Policies and Full Employment*, University of California Press, 1946, chapter 5.

to the ultimate results. An American Institute Committee, employing the Fairchild price index, applied the Lifo method to figures contained in published reports of Allied Stores, Inc., Associated Dry Goods Corporation, Federated Department Stores, Inc., Gimbel Brothers, Inc., W. T. Grant, Lerner, and Macy's for 1931 to 1940.[8] During that period, which can be criticized for not covering a complete business cycle, it was estimated that $468 million more taxes would have been paid under Lifo than under the retail method of inventory valuation. The American Mining Congress has also tested the effect of Lifo on the non-ferrous metal fabricating and smelting, petroleum refining and hide and leather tanning industries for the period 1927 to 1937. It was ascertained that the total saving in taxes would have been less than one half of one per cent.[9] We can therefore conclude that Lifo should not be chosen for its effect on taxes alone.

It is common knowledge that the United States Treasury fought against the price-correlation doctrine, as embodied in the base-stock (Lifo) method, for many years. As early as 1919, the Advisory Tax Board ruled that this technique was contrary to the provisions of the law for the reasons summarized below.[10]

(1) It sets off inventory gains of one period against inventory losses of others.
(2) It is not in harmony with the true meaning of income accrued.
(3) It is not widely enough used to be considered "good or accepted" practice.
(4) It is not fair to those who do not use it.

This position was reinforced in 1929 by the Supreme Court's decision in the Kansas City Structural Steel Company case. Unfortunately for the well-being of the base-stock method, that case did not bring out clearly the principles of base-stock; the broad economic aspects were almost totally disregarded by the company's counsel; and it is understandable why they escaped the notice of Justice Brandeis.[11] On the basis of this verdict, the Treasury Department was given grounds for refusing to permit the application of Lifo, although members of Congress later indicated in hearings on the 1938 Revenue Bill that the Tax Commissioner had the power to authorize its use.

Curiously enough, although opposed to the base-stock method, the Treasury Department has been quite inconsistent in its viewpoint toward the basic principle involved. In 1920, it allowed the tobacco industry to employ average cost and, subsequently, approved the use of "retail," "standard cost" and other systems in various industries. Even more significant has been its favorable attitude toward hedging operations whose similarity to normal-stock (Lifo) methods has been forcefully shown by Peloubet. Firms utilizing the base-stock (Lifo) system tend to ignore gains or losses caused by inventory price fluctuations; hedging, on the other hand, may be conceived as a form of insurance whereby the hedger loses these profits, but gains back the losses through his transactions on the board of trade. In the former case where organized markets are absent, certain companies have endeavored to accomplish the same results as hedging informally through the development of appropriate purchasing, selling, and accounting techniques. In the latter, the procedure is formalized through the medium of a developed futures market. In conclusion, it would appear that the

[8] *Journal of Accountancy*, Feb., 1942, "Lifo, Institute Committee Report," p. 146.
[9] Arundel Cotter, "Fool's Profits," *Barron's*, 1940, pp. 67–68.
[10] Advisory Tax Board, T.B.R. 65, Cumulative Bulletin, 1919, pp. 18, 22, 51, 53.

[11] M. E. Peloubet, "Acceptance by Congress of the 'Last-in, First-out' Method for Valuing Inventories," *American Institute of Accountants, Papers*, 1939, pp. 73–77.

Treasury had little basis for its discrimination.

The weakness of the stand taken by the Treasury Department finally became apparent even to Congress. Under Section 22 (d) of the Revenue Act of 1938, therefore, tanners of hides and skins and producers or processors of certain non-ferrous metals were permitted to make an "irrevocable election" with respect to using the Lifo method of inventorying their raw materials for a taxable year, commencing with January 1, 1939.[12] For the non-ferrous metal producer or processor, this method could be applied solely to inventories so mixed that they could not be identified with specific invoices; but tanners were not restricted by such limitations. In order to prevent undue tax avoidance, the 1938 Act specified further that a taxpayer desiring to make the change must adjust his inventories for prior taxable years and pay taxes resulting from such revisions, as the Commissioner deemed necessary.

Section 219 of the Revenue Act of 1939 retroactively amended Section 22 (d) of the Internal Revenue Code for taxable years after December 31, 1938, in the following fashion:

(1) Lifo was no longer limited to any particular group; it was extended to all taxpayers using it and applying for it.
(2) Permission was granted to employ the method for all goods whether raw material, goods in process, finished goods, or only to a special category.
(3) The amendment specified that Lifo, if elected, must be consistently adhered to in all subsequent periods.
(4) An exceedingly restrictive clause required that all statements of the firm's position, such as credit statements, applications for bank loans, and interim reports to stockholders, be based on the Lifo method.

In the 1942 Revenue Act, this last limitation was modified by allowing concerns to use Lifo providing that all annual reports to stockholders, partners, and other proprietors, or for credit purposes be prepared on that basis.

Despite the 1939 amendment, the Treasury Department held for several years that the Lifo method could not be used by retailers. As a result of the Tax Court's decision in the case of Hutzler Brothers Company v. Commissioner (8 TC No. 3), however, the Department was compelled to reverse its position in December, 1947.[13] The new regulations pertaining thereto altered the method of calculation formerly adopted by retailers employing Lifo by requiring:[14]

(1) The use of price indexes prepared by the Bureau of Labor Statistics, or some similar index; and

(2) The use of inventories at cost rather than at cost or market whichever is lower. The latter seems to be an unwarranted penalty, inasmuch as the taxpayer who uses Fifo is permitted to reduce his inventories if market is lower. Many problems remain to be solved before the procedure is entirely satisfactory, but the simplicity involved in the use of index numbers and the possibility of its extension render it a significant development.

LIFO AND THE FIRM

Accounting practice is replete with instances where external appearances of consistency are undermined by failures to correct for autonomous variables. Fifo can be cited as an illustration; the results obtained from its use vary widely from firm to firm and industry to industry. In the limiting situation where there exists a rapid turn-over of stock, Fifo may even approximate Lifo in its effect on stated income.

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[12] Cf. J. Tannebaum, "The Lifo Method," *Taxes*, June, 1947, pp. 492–8.

[13] J. P. Friedman, "Bureau Permits Lifo by Retailers," *Journal of Accountancy*, February, 1948, p. 118.

[14] For an illustration of the technique refer to the "Text of Bureau Release on Use of Lifo by Retailers," *Journal of Accountancy*, February, 1948, p. 123.

Fifo tends, unintentionally perhaps, to accentuate the element of speculation in management policies. This presents no difficulty for the firms, such as those utilizing cotton and wheat as raw materials, that are able to hedge through organized futures markets. Other concerns are not so fortunate and must devise informal hedging techniques if they hope to take account of the perilous nature of "fool's profits."[15] Although income resulting from changing factor prices is to be classified as profit in the formal accounting sense, the "real" position of the enterprise may be unchanged or worsened despite higher paper profits, and the formal inventory profits are usually undistributable as long as the firm continues to operate.

Some 26 corporations (for the most part in processing industries), therefore, adopted the base-stock method (Lifo) in the three decades prior to the passage of the Revenue Act of 1938 in the hope that it would provide them with more conservative and accurate statements of income.[16] An examination of these enterprises reveals that relatively few industries are represented and that a majority of the following factors obtain in each case:

(1) The average size of the inventories is significant in comparison to current assets, total assets and total sales.
(2) Raw material prices run parallel to those of finished goods and fluctuate constantly.
(3) The inventory stock remains fairly constant.
(4) Raw material costs represent a large proportion of total costs.
(5) The manufacturing period is lengthy.
(6) Finished goods are stored for considerable periods because of seasonality of demand.
(7) Competitors cannot readily differentiate their products.

Wherever these seven conditions prevail, there is considerable merit to the use of Lifo. Its application tends to correct the income statement, with minor exceptions, for changes in the price-level.[17] The minor exceptions relate principally to those assets other than raw materials, which are consumed during the period, since they are presumably charged to cost of finished goods on some other basis than Lifo. Their importance obviously depends upon their magnitude as compared to total production costs. Certainly, profits computed on this basis (for the type of enterprise described above) furnish a more reliable guide for investment decisions and dividend policies than do profits calculated on any other basis commonly used at the present time. Pricing policies, moreover, are aided materially by the use of Lifo.[18]

The uncritical application of Lifo to firms in general, however, magnifies at least two basic flaws in the logic behind this method. The first, which has been mentioned already, is essentially that, since Lifo concerns only inventory valuation, it can be considered no more than a partial corrective. Inasmuch as it is not customary practice to employ procedures comparable to Lifo covering the treatment of fixed assets and depreciation expenses income continues to be over-stated or under-stated in a "real" sense. For the type of corporation referred to above, the magnitude of error may be negligible; but when Lifo is extended to other industries in which raw material costs are not a significant portion of total cost, it becomes an important consideration. This difficulty can be rectified in one of two ways:

(1) By computing the value of fixed assets consumed during the period on the basis of replacement costs; or (2) by employing index numbers. The former, while

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[15] Arundel Cotter, *op. cit.*

[16] For a list of these companies, see Hearings, 75th Congress, 3rd Session (Before Committee on Finance), Revenue Act of 1938, H.R. 9682, p. 164.

[17] It is assumed that material costs are properly correlated with sales.

[18] This is true where Lifo is calculated on an annual basis; if done at more frequent intervals, the difference between it and Fifo tends to disappear.

theoretically possible, necessitates the frequent revaluation of assets on an individual basis, which is highly complicated and of doubtful accuracy; it would also probably cost more than it is worth. The latter solution presents a distinct possibility; it can readily be applied to both current and fixed assets and is not inconsistent with original costs which are the most objective and verifiable of data.

A second weakness of the Lifo method lies in its effect on the balance sheet. Conservatism requires that Lifo be applied during a period of low prices so that the inventory's market value will always exceed its recorded value. The consequence of this is the creation of hidden reserves which, while popular with bankers, have little actual justification. Accountants, such as George O. May, who condone this practice emphasize the income statement and believe that the utility of Lifo far outweighs its disutility.[19] It appears, however, that an accurately compiled balance sheet has considerable value to management, stockholders and many others. At the very least, those concerns employing Lifo ought to adjust the balance sheet through the medium of inventory valuation reserves containing debit or credit balances which reflect the difference between the inventory priced on the basis of Lifo and of current market value. A more comprehensive solution would involve the use of index numbers.

At the beginning of this section, we noted the widely divergent results obtained from using Fifo. It is now pertinent to observe that Lifo too may produce highly different effects depending upon the duration of the period of calculation and upon the point in the production process at which Lifo is applied.[20] In a similar vein, the results vary considerably depending on whether the raw material consumed is priced as it enters work in process, finished goods or cost of goods sold. The closer to the time of sale that the pricing takes place the better. These questions, in general, relate to mechanical, rather than theoretical, difficulties. Even granting this, the problem remains complex.

The question naturally arises whether or not the benefits of utilizing Lifo can be obtained without its attending disadvantages. There are two alternative possibilities; the first is to retain Lifo, but to complement it in such a way that the defects are corrected; the second is to discard Lifo in favor of stabilized accounting or replacement costs.

Necessary supplements to Lifo include the provision for reserves, containing either plus or minus balances, to reflect the difference between balance sheet inventories valued on the basis of Lifo and the same inventories computed on the basis of current prices, as well as some method for estimating the current worth of fixed assets and depreciation expense consistent with the Lifo method. The only relatively uncomplicated method of accomplishing the latter, which has been suggested in recent literature, is that of employing index numbers similar to the procedure permitted by the Treasury in the case of retail store inventories.[21] This procedure is not entirely comparable to Lifo, however, for the price of any single item may well change at a different rate than prices in general during a given period.

A moment's reflection over the appearance of the balance sheet and income statements, not to mention the augmented accounting and interpreting problems, after the introduction of the hodgepodge mentioned above, leads one to conclude that a

[19] G. O. May, "Postulates of Income Accounting," *Journal of Accountancy*, August, 1948, pp. 107–111.

[20] For a study of the mechanical difficulties, see W. A. Paton, "Lifo," *Journal of Accountancy*, May, 1940, pp. 354–361.

[21] S. J. Broad, "The Impact of Rising Prices upon Accounting Procedures," *Journal of Accountancy*, July, 1948, pp. 10–22.

Ferrous Fabricating Corporation
Balance Sheet, December 31, 1947

Assets	*Date Acquired*	*Original Cost*	*Stabilized Cost*
		(*000 omitted*)	
Current Assets:			
Cash		100	100
Receivables		200	200
Inventories:			
Finished goods	Apr. 1947—Materials (60%); Oct. 1947—Other (40%)	200	210
W.I.P.	June 1947—Materials (80%); Nov. 1947—Other (20%)	100	105.1
Raw Materials		100	101.3
Total Inventory		400	416.4
Fixed Assets:			
Land	1929 & 1932	70	109.3
Buildings	1929 & 1932	800	1,194
Less Reserve		436	634.4
Net		364	559.6
Machinery & Equipment	1938 & 1942	500	761.6
Less Reserve		315	491.8
Total Machinery Net		185	269.8
Total Assets		1,314	1,655.1
Liabilities & Proprietorship			
Current Liabilities		100	100
Bonds Payable		100	100
Total Liabilities		200	200
Proprietorship			
Common Stock	1929	600	817.2
Retained Income		514	537.9
Total Proprietorship		1,114	1,455.1
Total Liabilities & Proprietorship		1,314	1,655.1

uniform technique should be applied if at all possible. The dificulty of employing replacement costs has already been mentioned. Furthermore, although businessmen are naturally interested in replacement costs as a basis for making policy decisions, ordinary investors would seem to be most interested in the effect of overall purchasing power changes. Thus, at least as far as annual reports are concerned, the analysis appears to favor the application of index numbers throughout.

The term "stabilized accounting" can be applied to any accounting technique which eliminates the influence of changes in the value of money.[22] This objective is best obtained by adjusting original costs by any acceptable general price index. Although the results will vary somewhat depending upon the sensitivity of the index series, i.e., whether wholesale, retail prices, etc., are used, Broad has suggested that they are not too widely divergent for practical purposes.[23] To demonstrate the use of this method and to illustrate its effects, the balance sheet, cost of goods sold, and income statements of the fictitious Ferrous Fabricating Corporation are revised by using the following consumers'

[22] The concept was originally introduced by H. Sweeney, *Stabilized Accounting*, Harper and Brothers, 1936.

[23] S. J. Broad, *op. cit.*

price index furnished by the Department of Commerce (1935–9 = 100).

1929	122.5	1938	100.8	1947—Jan.	153.3
1930	119.4	1939	99.4	1947—Apr.	156.2
1931	108.7	1940	100.2	1947—July	158.4
1932	97.6	1941	105.2	1947—Oct.	163.8
1933	92.4	1942	116.5	1947—Dec.	167.0
1934	95.7	1943	123.6	1947—Average	159.2
1935	98.1	1944	125.5	1948—Jan.	168.8
1936	99.1	1945	128.4	1948—Apr.	169.3
1937	102.7	1946	139.3	1948—June	171.7

It is assumed that depreciation on buildings and machinery is 3 per cent and 8¼ per cent respectively per annum (straight-line method); that the average production period is six months; and that the raw material inventories are held for three months.

In the accompanying statements, it has been assumed that sales, production, pur-

Ferrous Fabricating Corporation
Statement of Cost of Goods Manufactured and Sold
For the year ended December 31, 1947

	Original Cost (000)	*Stabilized Cost (000)*
Raw Materials:		
Net Purchases	400	420
Add inventory—beginning of year	90	108
Total	490	528
Deduct inventory—end of year	100	105
Raw Materials Used	390	423
Direct labor	100	105
Manufacturing expense:		
Depreciation	65.3	99.2
Other	97.5	102.4
Total manufacturing expense	162.8	201.6
Add inventory—G.I.P., beginning of year	110	132
Total	762.8	861.6
Deduct inventory—G.I.P., end of year	100	105.1
Cost of goods manufactured	662.8	756.5
Add inventory—finished goods—beginning of year	180	216
Total	842.8	972.5
Deduct inventory—finished goods—end of year	200	210
Cost of goods sold	642.8	762.5

Ferrous Fabricating Corporation
Statement of Profit and Loss
For the year ended December 31, 1941

	Original Cost (000)	*Stabilized Cost (000)*
Net Sales	1,000	1,050
Cost of Sales	642.8	762.5
Gross profit on sales	357.2	287.5
Selling expense	200	210
Net Profit on Sales	157.2	77.5
General Expense	70	73.5
Net profit before Income Taxes	87.2	4
Deduct Federal Income Tax	30	30
Net Income	57.2	−26

chases and other pertinent items have an even, unbroken flow throughout the year.

These illustrative statements demonstrate that the depreciation and other fixed expenses, neglected in the ordinary application of Lifo, may be fully as important as changes in raw material prices. The use of index numbers permits a consistent and readily understandable revision of all values without impairing the principle of original costs. It obviously does not indicate the situations in which specific prices have moved at a more or less rapid rate than the general index. If replacement costs are to be considered by management, and they undoubtedly should be, there arises a strong justification for the three-column statements advocated by Husband. The first column would reflect original costs; the second, costs adjusted for changes in the price-level; and the third, replacement costs.

In the last analysis, the selection of the accounting technique rests upon the decision as to what constitutes the basic managerial responsibility. If the objective is simply to maintain the original money value of the firm, accounting in terms of original nominal money costs will be deemed sufficient. If accountability is to involve the holding up of "real" values, however, accounting must seriously weigh the use of index numbers; Lifo by itself is insufficient except in a very few cases where inventories dominate all other assets.

LIFO AND THE ECONOMY

The fact that ours is a monetary economy, that production processes are roundabout, and that goods are manufactured for distant markets introduces a considerable element of uncertainty into profit maximizing calculations, and is perhaps a sufficient reason for the periodic business fluctuations with which we are familiar. Under such conditions, it is apparent that expectations play a dominant role in determining the rate of production and investment at any given time.

The state of business anticipation, although a function of many indogenous and exogenous factors, is heavily influenced by the results reflected in historical accounting records since they provide the most objective and verificable data available. It follows that, whenever accounting methods distort the "real" situation, the magnitude and frequency of business fluctuations may well be increased as a consequence of over-optimistic or over-pessimistic expectations. With respect to inventory valuation alone, Kuznets has shown that the method of valuation most commonly employed by accountants may produce erroneous results of the first order of magnitude simply because it adds units valued in last year's dollars to those valued in the present year's currency with no correction. According to his calculations, estimated aggregate business profits and losses before and after adjusting for changing inventory values, 1929 to 1935, are as follows (millions of dollars):[24]

Year	*Business Profits or Losses Unadjusted*	*Inventory Revaluation Included as Income*	*Business Profits or Losses Excl. Inv. Gains*
1929	+8,522	− 712	+9,234
1930	+ 912	−4,331	+5,243
1931	−3,718	−3,308	− 410
1932	−6,193	−1,520	−4,673
1933	− 881	+2,440	−3,321
1934	+1,257	+2,131	− 874
1935	+3,382	+ 785	+2,597

It is of course impossible to estimate to what extent the Great Depression would have been alleviated had business policies been grounded upon real rather than money values. Nevertheless, business psychology, based on the adjusted figures, could well have been markedly different from that which actually prevailed during the period

[24] Simon Kuznets, "Changing Inventory Valuations and Their Effect on Business Savings and on National Income Produced," *Studies in Income and Wealth*, Vol. 1, part 3, p. 131.

under consideration. The argument assumes greater proportions when we consider the cumulative and reinforcing effect of the individual decisions. Pessimism engendered in those sectors of the economy where inventory losses are a determining factor spreads rapidly through the medium of changes in inter-industry demand, e.g., from higher to lower stages, and decreased purchasing power in the hands of consumers. The operation of the acceleration principle also has some validity within this framework.

The general use of Lifo, rather than of Fifo, would present businessmen with more realistic profit and loss statements. But how realistic? Section IV emphasized the possible importance of depreciation expenses to the individual firm. To neglect to adjust depreciation expenses for changes in the price-level impairs the concept of real profits fully as much as movements in raw material prices. The aggregate distortion caused by this omission cannot be determined accurately, but a crude approximation can be obtained in terms of 1939 dollars by taking the capital consumption allowances, i.e., the summation of uncorrected depreciation expenses recorded by each firm, published by the Department of Commerce and adjusting the annual figure by the change in the wholesale price index. The resulting value can obviously be criticized on the basis that it either assumes that all plant and equipment was created in 1939 or that that constructed prior to that time is offset by that produced subsequent to 1939; the latter is the assumption which we make by necessity.

I Year	II Cap. Cons.* Allowances Unadjusted (billions)	III Cap. Cons. Allowances Adjusted (1939=100)	IV Difference III−II (billions)	V Corp. Profits* Before Taxes Unadjusted (billions)	VI Corp. Profits Before Taxes Adjusted (V−IV)* (billions)
1939	8.1	8.1	—	5.8	5.8
1940	8.4	8.6	.2	9.2	9.0
1941	9.3	10.5	1.2	14.6	13.4
1942	9.9	12.6	2.7	19.8	17.1
1943	10.6	14.1	3.5	23.7	20.2
1944	11.8	15.9	4.1	23.5	19.4
1945	12.1	16.6	4.5	19.7	15.2
1946	11.0	17.3	6.3	16.5	10.2

* Source: Survey of Current Business, Supplement, July 1947. The figures are adjusted for changes in inventory valuations.

The values themselves are unimportant, except insofar as they affect decisions to produce and to invest. It is apparent that if uncorrected money profits influence anticipations at all—and empirical observation indicates that they do to a marked degree—both booms and depressions tend to be over-accentuated as a consequence of the present methods of recording historical cost. The situation would be somewhat improved if Lifo were generally employed, but would not be entirely rectified. A consistent procedure, such as the use of index numbers, needs to be applied to every item in the balance sheet and income statement.

Our principal concern up to this point has been with the level of demand and output as affected by accounting methods. Some attention should also be paid to the effect of accounting techniques upon the direction of the investment flow. Accounting statements constitute the major source of data respecting the comparative rates of return among industries. Assuming that investors seek to maximize their returns

in general, it follows that the efficiency of relative profits as an allocating device is impaired whenever there is non-homogeneity and non-comparability of statistics. As has been suggested previously, the Fifo method of inventory valuation introduces an extraneous element into the situation which conceals the real rate of return. In industries where inventories turn over rapidly, the distortion is perhaps negligible; elsewhere, it is likely to be appreciable. In any event, the presence of unsegregated inventory gains or losses will tend to cause the distribution of new investment to be less than optimum. During periods of rising prices, those industries with lengthy production periods and large inventories tend to over-expand; and when prices fall, they will tend to contract excessively.

The application of Lifo throughout the economy alleviates this problem by eliminating a large part of inventory gains or losses from the computation of profit. It does not, however, take care of the many other inconsistencies of generally accepted accounting procedures acting to reduce the usefulness of the profit concept. From the standpoint of the more effective operation of the economy, there appears to be a strong case for going beyond the rather artificial concept of Lifo and for introducing a method which provides more consistent results.

The doctrine of consistency has been emphasized by many members of the accounting profession. But consistency for most accountants means simply that the basis for recording historical cost and for computing the balance sheet and the income statement of any firm in this period should be comparable with that of past periods. Little effort has been devoted toward achieving inter-firm and inter-industry uniformity of results. The narrowness of the concept can be attributed partly to the inadequacy of the statistical techniques, partly to lack of agreement among accountants and to the institutionalized procedures already being employed, and partly to the emphasis which has been placed upon the individual enterprise rather than upon wider segments of the economy. With reference to the last point, evidence indicates that many "accepted" practices have developed because they solved the immediate problems of certain corporations and thus were integrated into the body of accounting theory through the backdoor without ever really belonging. Lifo itself is an illustration of this.

It is frequently remarked that the accountant's responsibility goes far beyond the individual firm and management. The publicized doctrines of integrity, truthfulness, disclosure, and materiality all suggest this fact. If such is the case, it becomes the function of accounting theory and of accountants to provide statements which are useful to society, as well as to the businessmen in question. Over-all comparability of results is therefore essential in order to increase knowledge and reduce uncertainty. In the long-run, the individual entrepreneur himself would benefit.

There remains to be discussed the effect of accounting methods on competition. Competition is frequently regarded as the core of the American industrial system, perhaps incorrectly in view of the known existence of monopolistic practices, and as the best available welfare norm. For it to operate effectively, pricing policies must be grounded upon real, rather than historical, costs. It is not inferred by this, however, that accountants should accept completely the economist's concept of costs for the latter is too vague and difficult to determine. What is suggested is that certain obvious flaws in accounting techniques be corrected to permit the better working of competition. If not, competi-

tion can be destructive, rather than beneficial.

Consider, for instance, the case of a highly competitive industry, such as cotton textiles, where the Fifo method of inventory valuation is employed by all firms. Assume further that the industry is confronted with rising raw material prices, as well as with an upward moving general price-level. Competition in the seller's market prevents any firm from immediately raising its selling price, since pricing decisions are based upon historical cost. Thus, the relative position of each firm is worsened in the long-run by the use of "generally accepted" accounting methods. It is to be noted that the argument can be applied to fixed costs, just as well as to inventories. Even in competitive industries where some entrepreneurs are cognizant of the need for higher prices because of the changing price level, the existence of those who are unaware of the problem interferes with adequate price adjustments.

The situation is further complicated by the fact that trade unions often base their demands for wage increases on the presence of large profits. It is therefore apparent that whenever a large portion of "net" income is in the nature of capital gains, which are undistributable if the enterprise is to continue operating, wages may become out of line with the real earnings of the concern.[25] These considerations indicate that the basic principle underlying the application of Lifo to inventory valuation could well be applied to the valuation of all assets.

Those agencies concerned with the preparation of National Income estimates, namely the National Bureau of Economic Research and the Department of Commerce, have long recognized the significance of the divergence between "real" and "apparent" income produced. They have endeavored to eliminate the discrepancy, although it is the consensus of those engaged in the preparation of National Income statistics that the correction should be made at the source.[26] Kuznets has admitted that a significant aspect of national income measurement is perhaps lost by causing income to diverge from what individuals believe it to be and upon which they base their actions.[27] In conclusion, therefore, it appears that the accountant might well benefit from lessons already learned by others.

[25] The analysis could also be extended to cover cases where capital losses exist; in such a situation, it is possible that wages would be forced down to excessively low levels.

[26] The Department of Commerce adjusts for changes in inventory valuation but not for depreciation charges because it feels that the necessary information to revise the latter is lacking.

[27] National Bureau of Economic Research, *Conference on Research in Income and Wealth*, Vol. 1, 1937, p. 155.

WHAT CONSTITUTES THE UNAUTHORIZED PRACTICE OF LAW BY ACCOUNTANTS IN TAX MATTERS*

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THE PROBLEM of what, in general, constitutes the unauthorized practice of law has plagued the legal and nonlegal practitioner for many years.[1] And the line of demarcation is not sharply drawn in spite of the numerous court decisions and statutes that have attempted to spell out where lay practice ends and legal practice begins.[2]

It is particularly vexatious in the field of taxation where the statutes, court decisions and administrative rulings so intertwine legal and accounting concepts that at times it is almost impossible to distinguish between them. In fact, the problem has been recognized by the United States Supreme Court, where in the Dobson case[3] the court stated:

> "Conflicts are multiplied by treating as questions of law what are really disputes over proper accounting. The mere number of such questions and mass of decisions they call forth become a menace to the certainty and good administration of the law."

Certified public accountants and attorneys have been attempting to delineate what constitutes the legitimate bailiwick of the accountant since 1935.[4] In spite of these top level conferences, there has been a failure to produce any satisfactory solution for either of the professions.

This professional controversy was intensified recently by an action brought in the Supreme Court of New York[5] by the New York County Lawyers' Association to punish for contempt[6] and to enjoin the alleged unlawful practice of law[7] by one Bercu, a certified public accountant. The City of New York had claims against a corporation for retail sales taxes and compensating use taxes attributed to prior years. In 1943, the corporation made large profits and felt it would settle the City tax claims if they could be deducted on the Federal income tax return for 1943. The company's regular accountant, who was also an attorney, was of the opinion that these taxes could not be taken as deductions. At this point, Bercu who was an experienced practitioner, was consulted, and after making a study of the problem, submitted a memorandum, indicating that the tax would be deductible in 1943, if paid. He submitted a bill for his services, was not paid, and sued to collect in the Municipal Court. The action was dismissed on the ground that the advice rendered by Bercu constituted the unauthorized practice of law.

Subsequently, the present action was brought. The Supreme Court held that respondent was not engaged in the unlawful practice of the law. On appeal to the Appellate Division, in a split decision, the trial court's holding was reversed.[8] In es-

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* This paper is based on a research study made in partial fulfillment of the requirements for the LL.B. degree at New York University.

[1] Llewellyn, K. N., "The Bar's Troubles, and Poultices—and Cures?" *Law and Contemporary Problems*, 104, Vol. 5, 1938.

[2] Hicks and Katz, *Unauthorized Practice of Law.* 1934.

[3] *Dobson v. Comm.*, 320 U.S. 489. 1943.

[4] Maxwell and Charles, *Joint Statement as to Tax Accountancy and Law Practice*, 32 A.B.A.J. 5. 1946.

[5] *New York County Lawyers' Association v. Bercu*, 188 Misc. 406, 69 N.Y.S. 2nd 730. Sup. Ct. 1947. See Note 56, Yale L.J. 1438. 1947.

[6] New York Judiciary Law Sec. 750 (7).

[7] New York Penal Law Sec. 270.

[8] Application of New York County Lawyers' Assn. v. Bercu, 273 App. Div. 524, 78. N.Y.S. 2nd 209 (1st Dept. 1948).

sence, the majority indicated that when it is necessary for an outside consultant to be called upon, other than the accountant auditing the accounts and preparing the tax return, to render tax advice especially of the kind involved in the principal case, the consideration of public protection requires that such advice be secured from an attorney. However, it would have been proper for Bercu to have resolved the problem himself had he been retained to prepare the tax return. The decision of Appellate Division was unanimously affirmed by the court of Appeals, the highest state court, without a written opinion.[9] It is not the purpose of this article to consider the merits of whether or not what Bercu did constituted the illegal practice of law. It is submitted, however, that the line drawn by the Appellate Division is artificial. To say that a distinction should be made between a tax problem that arises when an accountant prepares a tax return, and a similar problem that is presented to the accountant in an advisory capacity is arbitrary, and fails to consider the realities of the situation.

The courts have been often confronted with the vexing problem of when an accountant illegally practices law and their decisions present divergent views. Holdings favoring accountants were rendered under the following circumstances. In an old case prior to the enactment of the Sixteenth Amendment, it was held in Kentucky that a compromise effected by an accountant in a tax suit with the State were questions of fact that might properly be handled by an accountant.[10] In 1947, an outgoing Kentucky Attorney-General rendered a broad opinion to the effect that the preparation of tax returns by a non-lawyer constituted the unauthorized practice of law. However, the present Attorney-General indicated that the earlier ruling does not constitute an absolute prohibition against an accountant preparing tax returns and giving tax advice.[11] In New Jersey, it was held that a suggestion as to how a corporation could reduce its franchise tax was not outside the permissible scope of an accountant's activity.[12] But some doubt is cast on what view the New Jersey courts would take today in view of a recent decision[13] in which the holding of the Appellate Division in the Bercu case was cited with approval.[14]

The Federal Courts have also passed favorably, from the accountants' view, on the question. It was held that recovery could be had in contract, where tax accountants agreed to prosecute taxpayer's refund claims before the Commissioner of Internal Revenue.[15] And in a case involving tax litigation, the following statement in the opinion is significant:[16]

> "How any accountant doing income tax work could do his business at all without a knowledge of the statutes, decisions, and treasury rulings in income tax matters is difficult to see and we should hesitate to hold that the necessity of such knowledge would require every member of a firm of accountants to be a member of the bar."

In a series of Federal cases involving the assessment of penalties[17] for failure to file a personal holding company tax return[18] as required by law, without reasonable cause, there seems to be some confusion as to what extent reliance on an accountant's opinion will constitute "reasonable cause" to avoid penalty.[19] Where the ac-

[9] N.Y. Law Journal, July 21, 1949.
[10] *Dunlap v. Lebus*, 112 Ky. 237, 65 S.W. 441. 1901.

[11] *85 Journal of Accountancy* 173. 1948. *86 Journal of Accountancy* 97. 1948.
[12] *Elfenbein et al. v. Luckenbach Terminals, Inc.*, 111 N.J.L. 67, 166 A. 91. 1933.
[13] *Auerbacher et al. v. Wood*, 142 N.J. Eq. 484, 59 A. 2nd 863, at 864. 1948.
[14] Supra, note 9.
[15] *Wardman v. Leopold*, 85 F. 2nd 277, App. D.C. 1936.
[16] *Humphreys v. Comm.*, 88 F. 2nd 430, CCA-2nd. 1937.
[17] Int. Rev. Code, Sec. 291.
[18] Int. Rev. Code, Sec. 501.
[19] Supra, note 17.

countant kept the records and prepared the tax return[20] and where the tax returns only were prepared, but there was full disclosure of the pertinent facts by the client and on the return,[21] and where petitioner had no knowledge of income taxes, but placed such matters in the hands of certified public accountants to whom there was full disclosure,[22] there was no liability for penalties. But, when an accountant who prepared the tax return was only briefly informed of the corporate structure and the corporate president and attorney did not even consider the question,[23] and where there was no evidence that the accountant was an expert in tax law, although the petitioner, an intelligent business man relied on his advice,[24] failure to file personal holding company returns was not due to reasonable cause.

On the other hand, there are certain jurisdictions that clearly limit the activities of the accountant in the tax field. In Massachusetts, accountants are permitted to make out income-tax returns of the least difficult kind for individuals whose incomes consist wholly or almost wholly of wages.[25] But the court was careful to state:

> "Doubtless the examination of statutes, judicial decisions, and departmental rulings, for the purpose of advising on a question of law relative to taxation, and the rendering to a client of an opinion thereon, are likewise a part of the practice of law, in which only members of the bar may engage."[26]

In Illinois, a certified public accountant who attempted to present claims for refund of retailer's occupation taxes to the Department of Finance was held to be engaged in the unauthorized practice of law, although the Rules of the Department of Finance specifically permitted certified public accountants to represent taxpayers before it.[27] And in New York, in a City Court decision, where an accountant soliciting clients to represent them before the State Tax Commission to secure tax refunds rendered an opinion concerning tax liability, and sued to recover on the contract, he was denied recovery.[28] The court pointed out, however, that the question would be different if the plaintiff had actually performed the work before the State Tax Commission, and if he had the right to practice before such tribunal. And in Pennsylvania[29] an intermediate court held that advising clients how to avoid or reduce tax liability is not permitted since it requires a

> "... thorough familiarity with complicated statutes and with multitudinous court decisions."[30]

A sampling of opinions involving tax advice rendered by laymen other than accountants, indicates that here too, the law is still indefinite. A corporation engaged to represent clients for the purpose of reducing the assessed valuation of property and appearance before commissions,[31] the preparation of tax returns and tax pamphlets by employees of a trust company,[32] and the addressing of arguments to tax officials by employees of a trust company,[33] are considered to be appropriately performed by laymen. But, a corporation

[20] Frederick Smith Enterprises Co., P-H TC Mem. Dec. Serv. par. 47, 148. 1947.
[21] *Girard Investment Co. v. Comm.*, 122 F. 2nd 843 CCA-3rd, 1941.
[22] *Orient Investment & Finance Co. v. Comm.*, 166 F. 2nd 601, App. D.C. 1948.
[23] *Tarbox Corp. v. Comm.*, 6 T.C. 35. 1946.
[24] *Hermax Co., Inc. v. Comm.*, 11 T.C. 55. 1948.
[25] *Lowell Bar Assn. et al. v. Loeb et al.*, 315 Mass. 176, 52 N.E. 2nd 27. 1943.
[26] Id. at 183, 52 N.E. 2nd at 33.

[27] *Chicago Bar Assn. et al. v. United Taxpayers of America et al.*, 312 Ill. App. 243, 38 N.E. 2nd 349. 1941.
[28] *Mandelbaum v. Gilbert and Barker Mfg. Co.*, 160 Misc. 656, 290 N.Y.S. 462. (City Court, New York) 1936.
[29] *Blair et al. v. Motor Carriers' Service Bureau*, 40 Pa. D. & C. 413. 1939.
[30] *Id.* at 430.
[31] *Tannenbaum v. Higgins*, 199 App. Div. 861, 180 N.Y.S. 738 (1st Dept. 1920).
[32] *Groninger v. Fletcher Trust Co.*, 220 Ind. 202, 41 N.E. 2nd 140. 1942.
[33] *Merrick v. American Security and Trust Co.*, 107 F. 2nd 271 (App. D.C. 1939).

giving opinions on tax laws,[34] a business to determine the legality of property tax assessments,[35] and the soliciting of claims for refunds, although the court work was to be done by an attorney[36] were held to constitute the unauthorized practice of law.

There can be no doubt but that the practice of law extends beyond the court room.[37] The drafting of legal documents and agreements are properly within the exclusive domain of the attorney. And this sole jurisdiction is not for the primary purpose of creating a monopoly for the attorney, but rather to protect the general public against incompetency.[38] However, it seems that this exclusiveness might well be curtailed when the public no longer benefits, and at that point, all who are technically and ethically qualified should be able to offer their services to those who desire it.[39]

For many years, the lawyer avoided tax problems. The Committee on the Unauthorized Practice of Law of the American Bar Association recently stated:[40]

> "From the very first income tax act in 1913, lawyers have shunned the business of preparing income tax returns. Such work was too tedious, involved too much detail, did not yield an adequate return, and as a result the bulk of the income tax work in the country today, is not being handled by lawyers."

In addition, since the first modern income tax statement was enacted, the Treasury Department has sought the service of expert accountants in drafting and administering its provisions.[41]

Both the Tax Court[42] and the Treasury Department[43] permit certified public accountants to practice before them, which practice has apparently been approved by the U. S. Supreme Court.[44] Also, members of the American Institute of Accountants are bound by a code of ethics that is in many ways analogous to that of the attorney.[45] Further, the apprenticeship, education, and character requirements that the candidate for the certified public accountant's certificate must satisfy are most rigid.[46]

However, this does not necessarily give the accountant carte blanche authority to handle all phases of a tax problem. The Treasury Department Regulations specifically exclude laymen from practicing law.[47] In addition, it is also apparent that many accountants would be hindered in practicing before the Tax Court, in that its proceedings are conducted in accordance with formal rules of evidence.[48]

There is no simple way of staking out in the tax field the bounds that the accountant must not transgress. The American Institute of Accountants has always considered that tax problems other than those involving purely legal questions such as domicile or marital status, were within the proper domain of the certified public ac-

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[34] *N. Y. County Lawyers Assn. v. Standard Tax and Management Corp.*, 181 Misc. 632, 43 N.Y.S. 2nd 479 (Sup. Ct. 1943).

[35] *Crawford v. McConnell*, 173 Okla. 520, 49 P. 2nd 551 (1935).

[36] *Bump v. Dist. Ct. of Polk County*, 232 Iowa 623, 5 N.W. 2nd 914. 1942.

[37] *People v. Alfani*, 227 N.Y. 334, 125 N.E. 671. 1919.

[38] In re *Opinion of the Justices*, 289 Mass. 607, 194 N.E. 313. 1935.

[39] Address by Tappan Gregory, past president of Am. Bar Assn., *Law, Accounting, and Public Interest*, presented at 61st Annual Meeting of the American Institute of Accountants. 1948; see also note, 83 U. of Pa. L. Rev. 357. 1935.

[40] Report of the Standing Committee on *Unauthorized Practice of the Law*, 70 A.B.A. Rep. 259. 1945.

[41] May, *Accounting and the Accountant in the Administration of Income Taxation*, 47 Col. L. Rev. 377, at 378. 1947.

[42] Rules of Practice, Rule No. 2, Tax Ct. of U.S., 2 P-H Fed. Tax Serv., Par. 21, 518. 1949.

[43] Treas. Dept. Circular 230, Sec. 10.3, auth. by 23 Stat. 258, 5 U.S.C. 261. 1940.

[44] *Goldsmith v. U. S. Board of Tax Appeals*, 270 U.S. 117. 1926.

[45] Carey, John L., *Professional Ethics of Public Accounting*. 1946.

[46] See, for example, Handbook No. 14, *Certified Public Accountancy, Laws, Rules & Information*. The University of the State of New York. 1948.

[47] Treasury Dept. Circular 230, Sec. 10.2 (f), auth. by 23 Stat. 258, 5 U.S.C. 261. 1940.

[48] Rules of Practice, Rule No. 31, Tax Ct. of U.S., 2 P-H Fed. Tax Serv., Par. 21, 706. 1949.

countant by virtue of his competency and practice. In 1938, the Unauthorized Practice Committee of the American Bar Association set forth certain activities which they felt were wholly within the jurisdiction of the lawyer.[49] These included giving advice regarding the validity of tax statutes, the preparation of protests, claims for refund, and petitions, stipulations, or orders for review by the Tax Court, representing taxpayers at conferences with administrative authorities and conducting trials before the Tax Court. The accountants immediately objected, and the ultimate outcome of discussions between the two groups led to the creation in 1944 of the National Conference of Lawyers and Certified Public Accountants, to resolve the existing differences and arrive at an amicable agreement relative to the respective activities of accountants and lawyers in the tax field.[50]

The resolutions adopted by the Conference were:

> "1. That the public will be best served if income-tax returns are prepared by either certified public accountants or lawyers.
>
> "2. That it is in the public interest for lawyers to recommend the employment of certified public accountants, and for certified public accountants to recommend the employment of lawyers in any matter where the services of either would be helpful to the client; and that neither profession should assume to perform the functions of the other.
>
> "3. That certified public accountants should not prepare legal documents such as articles of incorporation, corporate by-laws, contracts, deeds, trust agreements, wills and similar documents. Where in connection with such documents, questions of accountancy are involved, or may result, it is advisable that certified public accountants be consulted."

Instead, however, of cooperation between the two professions, there has developed much bickering and unprofessional sniping that is in extremely bad taste.[51] Unfortunately, no panacea to the issue is apparent. In view of the struggle evidenced by the courts in trying to arrive at an equitable solution, due primarily to the inherent nature of the problem, it would seem that the real answer is to be found within the framework of the two professions.[52] No difficulty should be encountered in distinguishing between clear-cut questions of law and accounting. For those matters that are in the twilight area, there should be no reason why the leaders of both professions cannot reconcile such differences. And the problem must be solved not on the narrow plane of self-interest for either group, but rather with the purpose of determining how the most competent and effective service can be rendered that will best serve the public interest.

[49] Report of the Standing Committee on *Unauthorized Practice of the Law*, 63 A.B.A. Rep. 325. 1938.

[50] Joint Statement of American Bar Association and American Institute of Accountants, 77 *J. Accountancy* 511. 1944.

[51] 13 *Unauth. Prac. News*, No. 1, at 15. 1947; 83 *J. Accountancy* 453. 1947.

[52] Editorial, 84 *J. Accountancy* 177, 1947; Ray & Hammonds, *Teamwork in Tax Practice; Lawyers and Accountants Should Work Together*, 34 A.B.A.J. 5. 1948.

ACCOUNTING FOR ENTERPRISE GROWTH

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The various interests in any business, if they are to act intelligently in their relations with the enterprise, must have adequate information as to the progress, or lack of progress, made by the concern for each fiscal period. Evidence of progress, or lack of it, insofar as a business enterprise is concerned, can be subdivided into three major divisions:

(1) Financial position.
(2) Net income.
(3) Over-all expansion.

Simultaneous improvement in financial position, a large net income earned, and some growth are not all necessary to satisfactory progress. Yet there should certainly be evidence of at least one or two of these three if the company has truly progressed during the year. Any one of these phases of progress may be of such paramount importance that the other two aspects will be partially sacrificed so that the one of most immediate importance may be advanced. During a period of economic difficulties a company might forego both profits and expansion in order to improve, or perhaps merely to protect, its financial position. Again, during the early years of a new business it might be good policy to sacrifice, completely or partially, immediate profits and some measure of financial soundness in order that the company might grow and be in a position to take full advantage of later profit opportunities. In some cases it might well be that under favorable conditions a well-managed concern would show at the same time satisfactory profits, a sound financial situation, and continued growth.

The interrelationships of these three factors of progress are such that a complete accounting for enterprise activities should certainly devote some attention to each. The first, financial position, is concerned with the proper allocation of total resources among asset groups in relation to the nature of both the financing program and the operating activities. Sound financial condition does not necessarily involve a preponderance of current or quick assets but rather requires sufficient properties in every category to meet the needs of the enterprise, whether those needs are for assets to be used in operations or funds for the discharge of obligations.

Over the years, businessmen and accountants, working together, have developed the balance sheet to present data properly classified, clearly set forth, and pertinent to financial position. A well-constructed balance sheet presents in summarized form the various properties of the enterprise classified as to liquidity and sets off against these the various interests in or claims upon those assets classified as to type and imminence of claim. From this array of financial data one can determine with reasonable accuracy the status of the concern's financial health; through comparison of balance sheets prepared at successive dates any improvement or lack of improvement in financial position is readily discernible.

Income-producing activities and the income to which they give rise have a relationship best described in the expression "efforts and accomplishments." Costs and expenses incurred by the enterprise represent the efforts which it undertakes to create a product or service to be offered its customers; revenues, the amounts paid by customers for the product or service offered, indicate the acceptability of that product; net income, in turn, then measures

the over-all efficiency of the enterprise in producing something for which its customers, under current conditions, are willing to exchange other valuable assets. But progress of a company profit-wise cannot be adequately discovered merely by comparison of the net income figures for a series of periods. Here too a considerable amount of well organized data is required in order to present an informative and useful report. Accordingly, businessmen and accountants have developed a report to present the data necessary to explain how the streams of efforts and accomplishments (expenses and revenues) have combined to result in net income. Revenues are classified according to the enterprise activity from which they arise; costs are classified by the nature of the effort represented, such as labor costs, materials, advertising, administration, and the like. If desired, further classification of expense and revenue by department, operating subdivision, or territory can be made to produce additional information helpful to those interested in controlling or studying enterprise activities.

So much for the first two features of business progress. But what about the third, enterprise expansion or contraction or, more simply, enterprise growth? It is not so easy to point out the significant data to be included in a report on enterprise growth, because as yet no such report has been developed. A complete set of accounting statements at present includes a balance sheet, a statement of income, and a statement of surplus, with such supporting or explanatory schedules as may be necessary to expand the details contained in the basic statements. None of these statements purports to account for enterprise growth. True, each of them does contain some information tending to indicate certain changes in enterprise size or volume of business, but each is specifically directed at a reporting purpose differing from this. Therefore, such information as is presented in regard to enterprise growth is merely incidental and does not provide a complete, satisfactory explanation. This is true of internal statements prepared for management, as well as of published reports issued to stockholders and others.

The income statement presents the results of the enterprise activities that are directed at making a profit. An increase in such activities may or may not denote an increase in over-all size. Many a company has found it possible to increase production substantially with no change in productive facilities or personnel. Increased net income may not always indicate increased operations; it may result from reducing or eliminating certain unprofitable operations or it may follow more efficient use of the same resources. On the other hand, decreased net income may for a time be a necessary result of a large expansion program. So there is little in the income statement to point out the nature and cause of enterprise growth.

Balance sheets, especially if prepared on a comparative basis, are a little more helpful in presenting data concerned with enterprise growth. One can readily determine any increase or decrease in total assets; by careful analysis, the particular asset categories in which the various changes resulting in the net increase or decrease are to be found can be identified. By studying the equities side of comparative balance sheets it is possible, to a limited degree, to locate the source of some of the asset changes. But this is far from satisfactory. Information on expansion or growth is included in the balance sheet more by accident than by design. The balance sheet is designed to present information about the current status of assets, liabilities, and proprietorship, not information about enterprise growth; consequently, no clear, well-organized explanation of that subject can be found

or even derived from the balance sheet.

The surplus statement is little more than a summary of one important account; although it does present the amount of change in enterprise size resulting from profits retained in the business or from past profits now distributed as dividends, no one would call it a complete picture of growth.

Surely data relating to enterprise expansion or contraction are significant. Growth is an important phase of progress. One cannot properly pass judgment upon adequacy of income and soundness of financial position without some knowledge of company policy regarding not only over-all expansion or contraction but also about any shifts in field of activity, type of operation, or method of financing. Has the concern obtained additional assets during the period? From what source and for what purpose? Have new plants been acquired? Or old ones discarded? Is there a tendency to favor one equity interest over another as a source of assets for expansion, or even for sustained operations at the same level? If so, what effect does that policy have upon the relative security and position of other equity interests? Is present low income or precarious financial position the result of an expansion program? Does the expansion of this period justify decreased income and financial risk? Is the enterprise still expanding; has it reached a temporary plateau in its growth; or has it passed the peak and begun to shrink, with eventual dissolution a certainty? These and many similar questions should be of vital importance to anyone interested in business enterprise whether his interest is that of present or prospective management, owner, creditor, or outside regulatory agency. Present accounting statements provide only partial answers to such questions. We do not have in general use any adequate statement of enterprise growth as such.

Such information is significant, but accountants have never developed any report to account adequately for change in enterprise size. And businessmen have never demanded such a report. One can only hazard a guess as to why. But it seems that at least a partial answer lies in the fact that business has not yet learned to make complete use of all the services which accounting has to offer. Although double-entry bookkeeping is an old and established procedure, the art of business management has as yet only begun to explore the possibilities of accounting. There is a common misconception that accounting provides nothing but historical data about past activities, data which are of little value to management concerned with the present and future in an ever-changing business environment. This is far from the truth. Double-entry bookkeeping has never been merely a record mechanism. Inherent in its quasi-statistical procedures of collection, classification, summary, and presentation of enterprise data are considerable analysis and interpretation. Each transaction entered into by the enterprise must be analyzed and its effect upon enterprise resources and equities determined before a suitable, analytical record within the double-entry framework is possible. Then follows classification of transaction facts into significant, carefully defined categories wherein like data are collected for periodic summarization and report. These data, analyzed, classified, and summarized, are then available for whatever use may be required.

Nowhere is there ready at hand a more useful aid to management than the great store of pertinent enterprise data accumulated in the accounting records. Properly organized, these data can be used to evaluate the success of past efforts in terms of accomplishments either in total or in detail. What better basis for planning future action can one have than a realistic, accurate

report of the results of past actions?

At present, management and other interests concerned rely chiefly upon the balance sheet and the statement of income, supplemented by certain supporting schedules. But as these business interests become more familiar with the value and usefulness of accounting data—and only a beginning has been made as yet—they will call for, and accountants will supply, new types of reports and procedures utilizing more of the presently unused data lodged in the accounts. Not many years ago such currently accepted accounting developments as cost analysis by departments, budgetary estimates, and standard costs were neither used nor demanded. Today they are commonplace. Continued progress in this direction is certainly indicated. An additional statement or report accounting for enterprise growth would be a logical step in this evolutionary process.

What should be the nature of such a statement? What should it include? What data are required to answer the type of question suggested earlier as not being satisfactorily answered by the familiar accounting statements now in general use? Perhaps a clue can be obtained from reviewing the content of present accounting reports. Basically there are but two: the balance sheet, which may be said to report the enterprise assets and equities at rest as of a given point of time; and the income statement, which reports the use to which assets have been put during a period through business operations. Thus, we have in the balance sheet assets and equities at rest, and in the income statement assets in action. What about equities in action? Is there no activity among the equities comparable to the utilization and transformation continuously carried on among the assets? Certainly there must be. Liabilities change from day to day, as some of them are paid and others incurred. And their proportions vary as proceeds of bank loans are utilized to pay creditors or tax claims, as stock issues are used to obtain funds to liquidate bonded indebtedness, and as "reinvested earnings" are used to replace the assets previously provided by one or more of the other creditor or ownership interests. Perhaps the amount of activity among the equities is not so great as that among the assets but activity there certainly is, activity which is indicated in present accounting statements only by inference, if at all.

A direct relationship between the equity interests in a company and the growth of that enterprise is apparent and becomes even more evident upon further study. The funds or properties required by an enterprise for operations must be supplied initially by some equity interest—stockholder, bondholder, or other creditor. If further expansion is desired, some equity must provide additional resources either by paying in new assets or by refraining from withdrawing earnings. In short, equity interests provide the assets with which the enterprise operates and expands.

Looked at another way, the activities of an enterprise may be divided roughly into two groups; operating activities and financial activities. Operating activities include the profit-making or economic transactions entered into by the concern in an effort to provide a suitable product which will be desired by the consuming public and for which the company will receive assets sufficient to cover all costs and provide a margin of profit. The second group, financial activities, includes all transactions entered into by the company for the purpose of obtaining adequate assets for enterprise needs as they occur. The two groups are quite separate. At present, the first is reported in the statement of income; the second is not reported at all, except as the results of these transactions are included in the final balance sheet. And there is considerable difference between reporting the

results of an activity and presenting the activity itself.

There is also a close tie between enterprise financial activities and enterprise growth; indeed, the two come close to being synonymous. A full reporting of financial activities would necessarily include complete information about enterprise growth; a report of enterprise growth would certainly include the effect of financial transactions. If it is also recognized that financial transactions involve the equity accounts, the basic theory of the suggested report is complete: a statement of enterprise growth would summarize the financial transactions which give effect to the balances recorded in the equity accounts.

It should be noted that there is considerable information in the equity accounts which does not find its way into our present accounting reports. This is true of all real accounts (asset, liability, and net worth) but is not nearly so applicable to the nominal accounts (income and expense). One explanation may be found in the nature of the items represented by the accounts and another in bookkeeping procedures. Accounts are really statistical categories; they collect similar data for later summarization and reporting. But the data collected in ledger accounts, unlike simple statistical classifications, may be either positive or negative; that is, they may show either an increase or a decrease in the category quantity. Accounts are thus two-sided records of quantity, one side for increases, the other for decreases. Prior to reporting the amounts of these categories in accounting statements at the end of the fiscal period, bookkeeping procedure provides for summarizing each category or account in a single figure representing its "balance," which is the excess of increases over decreases. Real accounts commonly receive both increase and decrease data; nominal accounts rarely receive anything but increases. Hence, the balance of a real account is generally a net figure representing the excess of increases over decreases; the balance of a nominal account is merely the sum of the increases.

Now certain transactions, such as obtaining or liquidating a bank loan, affect only balance sheet accounts. The balance sheet, because it includes real accounts and reports net balances, presents only the result of such a transaction. It does not report the transaction itself. Thus the action of incurring or liquidating indebtedness, is not reported at all.

Other transactions, such as the sale of product, affect both balance sheet and income statement accounts. Because such transactions affect nominal accounts, both the action involved and the result of the action are reported. Thus sales are reported as sales in the income statement, and the result of the transaction—its effect upon assets and equities—is reported in the balance sheet. But transactions concerned with incurring and liquidating indebtedness appear in the balance sheet only, the results, not the activity, being reported.

The income statement, therefore, presents an analytical summary of some of the transactions which act to produce the balance sheet. Others which are equally effective in creating balance sheet amounts are not reported as transactions in any accounting statement. Thus it is not quite proper to say that the income statement connects successive balance sheets; it connects them only to a very limited degree. Considerably more information than is presented in the statement of income is required to give readers a summary of all the transactions which worked to produce the balance sheet.

One important group of transactions not reported in the income statement consists of those previously described as the financial transactions which are largely

recorded in the equity accounts. By summarizing and presenting in organized fashion the transactions recorded in the equity accounts, significant data not currently reported in accounting statements are made available for managerial and investor use. Such a report, when coupled with the present statement of income, will present a much more complete picture of enterprise activities than is now provided.

The basic theory of the report of enterprise growth is to regard it as a summary of the financial transactions in the equity accounts which is designed to explain enterprise expansion or contraction during the period. With this purpose in mind, it may be possible to outline in a general way the content of such a report. It seems that a complete report on enterprise growth should include the following:

(1) A comparison of total asset input with total asset output to arrive at the net increase or decrease in enterprise size.
(2) Classification of asset input and asset output according to the equity contributing or claiming the assets involved.
(3) Presentation of the relative average asset contribution of various equity interests, together with the cost, in interest, dividends, etc., to the enterprise for the use of the assets contributed.
(4) Organization of the material in such a way that any shifts from one type of equity financing to another are readily determinable.

A few words in explanation of each of these points may be helpful.

Net enterprise growth is, of course, the difference between total assets put into the company and total assets paid out by the company. This is not the same as cash receipts and disbursements; it includes all assets. It is the net increase in both assets and equities and therefore in the enterprise itself. There are other ways of determining net increase in enterprise assets or equities but in this report, as in the income statement, it is not only the final result that is significant but the proper marshaling of the many contributing factors. From these data, if they are properly organized and described, important conclusions can be drawn as to the effectiveness and success of managerial decisions regarding financial matters.

For this reason it seems desirable that a broad view of financial activities be adopted in order that as much pertinent information as possible may be included. Growth comes from within the enterprise as well as from without. Not only do assets derived from loans and investments by creditors and investors increase the enterprise size, but net income not distributed as dividends likewise works to expand the company. Both external and internal financing should be included in the financial transactions to be reported.

This same desire for complete information about enterprise growth requires a broad concept of the term "equity interests." And this can be justified in the very nature of business enterprise as well. Modern corporations have become something more than just organizations through which an individual or group of individuals makes products or services available to prospective customers. Corporations have become social agencies that enable widely diverse and specialized interests to meet and contract for their common benefit. It is no longer a case of one equity, as stockholders, employing the others as bank lenders, for example; today all meet together on more or less common ground since each in one way or another can exert pressure in an attempt to gain certain ends. Equity interests, insofar as a statement of enterprise growth is concerned, can well be extended to include not only shareholders and creditors, but employees, customers, and tax-levying authorities as well. Each of these is important as either a source or a claimant of enterprise assets, or both, and therefore is a factor in expansion or contraction of the company.

Such a broad interpretation of the content of the proposed report has another incidental advantage which, although little more than a by-product of the main purpose of the statement, is nonetheless important. A summary of asset input and output on such a comprehensive basis as indicated is a summary of the total flow of resources through the enterprise—the total properties administered by enterprise management during the period. Thus we have a measure of management responsibility that is not provided in any other accounting report. Much is made of management's stewardship. Here we have a quantitative measure of the extent of that stewardship. On the other hand, we have a summary of the properties made available to management during the period for use in operations. Surely this provides a better basis for evaluating the adequacy of net income earned than does the limited information regarding operating assets found in balance sheets prepared at the beginning and the end of the period.

These summarized data of asset input and asset output should be presented neither as unexplained totals nor as unorganized lists. Some detail is required and as is customary in accounting statements, the data should be made more understandable and useful through appropriate classification and interpretive organization. Since the statement of enterprise growth is proposed as a report of financial transactions the most useful classification might well be by type of financial transaction. This in turn goes back to the nature of the equity interest concerned. Briefly, assets or services are advanced by shareholders, long- and short-term creditors, employees, customers, and, if you will, by taxing authorities. Sooner or later, each demands repayment, plus—in some cases at least—a fee for the use of the resources it advanced to the enterprise.

A proper classification should show the amounts advanced throughout the fiscal period by each of the equity interests and the amounts repaid to them either as a return of the assets advanced or as a fee for the use of those resources. This also provides for the third and fourth points listed above. With such a marshaling of the data it should be possible to indicate the average advance, throughout the period, by each of the several interests—that is, the average contribution of each equity interest to enterprise assets and operations. Likewise it should be possible to determine the average charge levied by each interest for the assets advanced. Combining these two, average advance and attendant charge, gives the statement reader valuable information concerning the relative cost of obtaining assets from the various equities, information which at present is not satisfactorily provided in any accounting statement. Thus readers may become informed of the cost of securing new growth through any one of the avenues available to the company.

Any tendency to favor one method of financing over the others would be readily apparent in a report as described. And, in a series of reports for successive years, long-range financial policy would be evident. Data regarding costs of the various methods of financing, studied in conjunction with the long-range policy, should be very helpful in appraising the wisdom of managerial financial decisions.

So much for the basic theory and general requirements as to content and organization of data within the statement. Just what form will this proposed report of enterprise growth take? Will it be a balanced schedule of two quite distinct categories such as we have in the balance sheet? Or will it be a series of deductions and remainders in income statement fashion? Quite possibly it will be neither. It is certainly conceivable that the data desirable in this report will not readily

lend themselves to either of these two statement forms. And that may be all to the good. Perhaps accountants should not be content to present complex and highly summarized data in statements which resemble statistical tables and which are accompanied by very little explanatory comment, comment which most readers need and would appreciate.

If a statement of enterprise growth does not accommodate itself to a single quasi-statistical table, perhaps we will be forced to depart from our traditional reporting procedures and present the required information in text form, supported where such support is required by several short tabular summaries.

The essence of this paper may be summarized somewhat as follows:

(1) Information about enterprise growth, even if not essential to proper appraisal of enterprise progress, would certainly be helpful.
(2) There is not at present any generally used report adequately reporting on enterprise growth.
(3) Data for such a report are readily available within the equity accounts of any reasonably satisfactory accounting system but are not presented in published financial statements.
(4) Given a demand for such information, accountants can surely evolve a useful, interpretive statement or report presenting all financial transactions in organized summary form that will account for and explain enterprise growth.

And finally we should face the ultimate question: What is the basic purpose of this proposed report? The answer must be the same as it would be if the question were directed at the income statement or the balance sheet: to provide useful information about the business enterprise, thereby leading to better understanding by all interests and to more enlightened control of business activity by management and investors.

INVESTMENTS IN CORPORATE REPORTS

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THE PROPER presentation of the "investments" section in corporate annual reports is frequently of great importance. This section shows investment in assets which are not under the direct supervision of the managers of the corporation and large amounts are frequently involved. Yet present methods of showing investments in financial statements are usually inadequate. There is lack of uniformity which makes it difficult for the reader to interpret the figures, descriptions are usually too limited, and the results of investment operations are almost always buried with other items on the income statements. As a result the reader is unable to judge the ability of management insofar as the investing of funds is concerned.

Considerable improvement would result if those who are responsible for the construction and approval of corporate reports would present:

1. A balance sheet which showed original cost and market or estimated values at the beginning and end of the period for each of the major investments. If more than a few are involved, a separate schedule would be appropriate.
2. An income statement on which dividends, interest, and investment gains and losses would be segregated from the results of operations.
3. A statement of funds, showing at least the gross movements of funds into and from major investment accounts.

Importance of the Investment Account[1]

Strictly speaking, all holdings in subsidiary companies are investments. With this interpretation the investment account would certainly be by far the most important item in many corporate reports.

There are several logical reasons for avoiding this treatment and preferring the use of consolidated statements. But even after eliminating all controlled subsidiaries the investment account is still of major importance in most financial statements. Of 131 companies studied for the purpose of determining how investments are handled at present, it was found that only six reported no investments at all. The most important members of this unusual group were Montgomery Ward and United States Gypsum, which have an allied management.

Only a few companies showed a small amount of investment. For instance, Allegheny Ludlum Steel has shown "Other Securities—$605." But for the most part the amounts were substantial, often running into many millions of dollars. Schedule I shows some of the more important cases.

Schedule I

Sample Companies With Large Investment Accounts*

Company	*Investment* (figures rounded)
American Smelting and Refining	$35,000,000
Anaconda Copper	11,000,000
Du Pont	19,000,000
General Electric	58,000,000
General Motors	39,000,000
United States Steel	22,000,000

* 1947 reports.

Whether the amount involved is large or small, there is a fundamental reason why the investment account deserves spe-

[1] By "investment account" is meant a separate section on the balance sheet, not those securities which are carried as current assets.

cial treatment. As George O. May has pointed out, corporations may have two distinct types of revenue:[2]

Primary—from the ordinary activities of business, including gains and losses from the sale of fixed assets, and

Secondary—transferred incomes derived from investments.

The American Institute of Accountants, in *Examination of Financial Statements* (pp. 15–17, 32) has stated that investment transactions should be carefully segregated in the accounts, and, where material, given distinct recognition in corporate reports. Despite this injunction the reporting practices of today do not provide the reader of statements with much useful information. In his recent work on financial analysis, Roy A. Foulke, Vice-President of Dun and Bradstreet, stated flatly: "Investment is a mystery item."[3]

A Texas banker, Fred L. Florence, was equally critical: "Too frequently reports are unsatisfactory as to 'other asset' items. This is particularly true of investments in and advances to affiliates. In many cases the captions used do not satisfactorily reveal the true nature of the items which are included therein or the basis of valuation."[4]

The study of several annual reports for each of 131 important American and Canadian corporations would appear to support these statements. In general, two major types of investments were presented: "Investments in Affiliates and Subsidiaries Not Consolidated" and "Other Investments." Schedule II shows the frequency of their occurrence:

[2] George O. May, *Financial Accounting* (The Macmillan Company: New York, 1946), p. 216.

[3] Roy A. Foulke, *Practical Financial Statement Analysis* (McGraw-Hill Book Company, Inc.: New York, 1945), p. 88.

[4] Fred L. Florence, "What the Banker Expects of the Certified Public Accountants," an address to the Dallas chapter, Texas Society of Certified Public Accountants, quoted by Victor Z. Brink, *Journal of Accountancy*, June, 1947, p. 527.

Schedule II

		Companies
Investments in Subsidiaries and Affilates not Consolidated		77
Other Investments		96
Listed as:		
Other assets	26	
Miscellaneous	19	
Other Investments	18	
Sundry	13	
Securities	12	
Marketable Securities	7	
Investments and Real Estate	1	
	96	

The above schedule is somewhat condensed, since many of the companies showed several categories of investments. In such cases the largest item, or, if there were two of approximately equal importance, the one with the most descriptive title is shown above.

BALANCE SHEETS

The bases for showing the "Investments in Affiliates and Subsidiaries Not Consolidated" by the seventy-seven companies were divided as follows:

Schedule III

Valuation Bases[5]	*Number of Companies*
"Cost"	25
"Cost less reserves"	12
Debiting share of subsidiary profit, described in various ways	8
"Less reserves"	7
Foreign at exchange rates[6]	5
Schedules, "net," "list," etc.	5
"Not more than share of subsidiary equity"	3
"Not over cost"	3
"Cost plus advances"	2
"Cost less dividends"	1
"Cost less adjustment at acquisition"	1
"Market"	1
"Market where quoted"	1
"Value, plus cost of additions"	1
No bases shown	10
	85

[5] Eight companies used more than one basis for important holdings.

[6] Many of the companies showed foreign subsidiaries, but used a different basis—often "cost" or "cost less reserves."

Some leading authorities advocate treating investments much like ordinary inventories, at cost or market, whichever is lower.[7] Although the nomenclature varies, it seems possible that many of the "cost, less reserves," "less reserves," "not over cost," etc., represent attempts to follow this "cost or market, whichever is lower" rule. However, several of the reserves were in round numbers which did not give the appearance of being an adjustment to a market price.

Some companies did not present a consolidated statement, yet took up subsidiary profits in a manner which was very similar. In this way they apparently attempted to avoid some of the effects of consolidation, while achieving some of the beneficial results. General Electric, for instance, described their practice in 1946 as follows:

> The value of the parent company's investment in each affiliate is adjusted each year-end so as to represent General Electric's advances to and equity in the net worth of the affiliate, computed on the same basis of accounting as that employed by the parent company. In the year-end revaluation adjustment, changes in net worth of affiliates which are attributable to differences between earnings from operations and dividends paid are credited or charged to the Parent Company's Earned Surplus account as "revaluation of investments in affiliates for differences between net income or losses and dividends paid"; changes in net worth resulting from the realization of profits or losses on securities sold or otherwise disposed of by affiliates are credited or charged to the Parent Company's General Reserve, or, if the security involved is General Electric stock, to Capital Surplus, and changes in net worth attributable to unrealized appreciation or depreciation of securities owned by affiliated companies are credited or charged to Reserve for Investments. For this purpose, the determination of undistributed earnings from operations includes provision for elimination of intercompany profits included in the inventories of the respective companies and for the estimated amount of income taxes which will be payable in the event of subsequent distribution of retained earnings.

DuPont also absorbed the book value change of an investment. It has done this for many years in regard to its large holding of General Motors.

As for the ninety-six companies which showed other types of investments, some indication of the variety of descriptions was given in Schedule II. Many bases of valuation were also employed for this group. Schedule IV lists the more important bases which were indicated.

Schedule IV

Valuation Bases	*Number of Companies*
"Cost"	16
"Cost less reserve"	12
"Less reserve	14
"Cost or less"	10
"Cost or market"	1
"Par"	1
"Less estimated loss"	1
"Less than equity"	1
No basis shown	40
	96

The previous remarks concerning the uncertain nature of "cost" or "cost or market" again seem applicable.

There is no general agreement as to whether the lower of cost or market should be on an item or group basis. To a certain extent it would seem proper to use the group basis, since the investments together constitute a fund. However, this might in certain cases conceal information of a rather startling nature.[8]

INCOME STATEMENTS

As far as the income statements were concerned, security transactions were not described in detail by any of the companies studied, although a few of them gave schedules showing holdings as of report

[7] Roy B. Kester, *Advanced Accounting* (Ronald Press: New York, 1946), p. 117.

[8] The much discussed case of the 1934 report of Allied Chemical and Dye will serve as an illustration. This case is discussed in Benjamin B. Greidinger's *Accounting Requirements of the Securities and Exchange Commission* (Columbia University, 1939), p. 121–122.

date and a year previous. Among these were General Motors, International Harvester, and Celotex. Coty International gave both parent and subsidiary reports, while Standard Brands and Alaska Juneau gave reports for principal subsidiaries. For the rest the usual indication of a change was an increase or decrease in the reported item.

Of the seventy-seven companies showing subsidiary investments, sixteen showed no substantial change on the balance sheet. Of the other sixty-one, only thirteen specifically described any resulting profit or loss.

Of the ninety-six companies showing "other investments," nine showed no change. As for the remaining eighty-seven only fourteen showed specific profits or losses on investments in the income statement. Most of the others had general "income credits" or "sundry debits" in which any profits or losses presumably were gathered.

Union Carbide and Carbon showed an "Increase in value of Marketable Securities" and "Reduction of Valuation Reserve—Securities Sold" in 1945, and a "Decrease in Value" in 1946.

Sinclair Oil, American Can, American Locomotive (1945), American Smelting and Refining, Bendix, and Celotex were among the few which showed a definite "profit on sale of securities" or "profit on sale of investments." Distillers Seagram (1945) was unique in reporting a "Loss on Sale of Investments."

Owens-Illinois Glass was typical of the group which showed "Profit on Sale of Securities and Other Income." A few showed no category on the income statement which might include such items even in a general way—although the investments account showed a change. Among these were Allied Chemical and Dye, Cudahy, First National Stores, Johns Manville, and Socony Vacuum. However, perhaps there was no such profit or loss to report.

In general, a study of the income statements appears to indicate that the great majority of the corporations separated the results of operations from the profits and losses due to other financial transactions. An analyst interested in judging the ability of the management to manufacture and sell a product could proceed with some confidence.

Any attempt to judge the ability of management to invest wisely, however, would not be very successful. It may be argued that in many cases the investments are in subsidiaries whose stocks are wholly owned or closely held by several investors, and current market values are not available. Likewise it may be said that the profits and losses on investments are usually not material in size, and no service would be rendered by making a fuller disclosure.

On the other hand, corporations must face the fact that many of their stockholders are only "interim owners." A volume of transactions equal to the entire issue of stock may take place on the New York Stock Exchange in the course of a year. In such circumstances it may be asked whether present practices, conservative from long-run point of view, are sufficient to serve their needs. Should reports give an indication of management's ability to handle the investment of funds outside the main business and should they be sufficient to help support fair market prices for the investor who must sell in the near future? Since the principal market support will usually come from expectations concerning operating income, the point seems debatable.[9]

[9] *Accounting Research Bulletin No. 1,* Committee on Accounting Procedure, American Institute of Accountants, New York, September, 1939, pp. 1 and 2: "In the last forty years the outstanding change in the working of the corporate system has been an increasing use of it for the purpose of converting into liquid and readily

A suggested solution—that market prices, where available, be shown in parentheses or footnotes—apparently has not found much popular recognition. Only eight companies showed "market" in parentheses. Several others gave footnote descriptions—a few "less than market" or "less than equity" or some other indication that they considered the value given to be conservative, but such descriptions were rare. In general, investments seem to be treated either as a nondepreciating fixed asset, or as a peculiar sort of inventory item.

Even when market values are not available, some adjusted showing can be made. The recent English Companies Act, Part I, 2 (2) (c) suggests: " . . . or, in the case of investments not having a market value, their value as estimated by the directors. . . . " Such a treatment is apparently unusual in America, though occasionally it appears, e.g. the 1947 report of General Electric and the October, 1948 report of the Sheraton Corporation.

It seems logical to believe that the significance of the investment account is likely to increase rather than otherwise. The attitude of American management is indicated in a survey by the National Industrial Conference Board.[10] In that report, the Board states on page 9: "The security of the corporation as an economic unit appears frequently to be a motive of management more compelling than profits for distribution to stockholders." And again, on page 11: "The security motive in business policy is overwhelmingly evident at a time when real danger seems to loom ahead."

From the evidence available one might conclude that the item of "investments," while admitted to be important, has to some extent been neglected by accountants in recent years. This would seem to be an area where improvements could be of real value to those who study annual statements, and one in which improvements could be made with only a moderate expenditure of effort.

transferable form the ownership of large, complex, and more or less permanent business enterprises. . . . As a result of this development in the field of accounting, problems have come to be considered more from the standpoint of the current buyer or seller in the market of an interest in the enterprise than from the standpoint of a continuing owner. The significance of this change is perhaps not yet fully appreciated, and whether or not the rapid exchange of owners is beneficial to society is a large and important question which society itself should carefully consider; but as long as the practice exists accounting must have due regard for it."

[10] *Effects of Taxation Upon Corporate Policy*, 1943.

THE TEACHERS' CLINIC

S. Paul Garner

Editor's Note: Many of the experienced teachers, as well as some of the new ones, have developed devices and techniques for the presentation of certain of the knotty aspects of accounting, and it is felt that such suggestions might well be made available to the other members of the teaching profession through *The Teachers' Clinic*. Accordingly, contributions are hereby invited. Please address all correspondence to S. Paul Garner, School of Commerce and Business Administration, University, Alabama.

THE USE OF FILMS IN ACCOUNTING INSTRUCTION

W. J. Fleig
Ohio State University

A few students have some knowledge of manufacturing and distribution operations but many know little more about business than what they have observed when making a purchase at a retail store. This has long been a handicap to accounting instruction.

Plant visitation is one method used to acquaint students with commercial practice. A tour of a business enterprise is very desirable but may have certain disadvantages and in some instances is impractical if not impossible. The absence of near-by large scale industries may preclude plant visitations. Certainly, comparatively few schools are in a location where students can visit a number of diversified business operations and even where field trips are possible scheduling is difficult because of interference with other classes. Only a small portion of the time available for a field trip can be devoted to actual observation of industrial activities since much time is consumed in transportation to and from the enterprise and in going from place to place within the plant. In many instances certain operations cannot be viewed because of the hazards involved or because the time of the trip does not coincide with the time of a particular operation. The presence of factory noise makes it difficult and sometimes impossible for the student to hear the explanation of a qualified guide even though the students are in small groups.

Motion pictures showing commercial activities are available from many industrial concerns and associations and some schools are using these in lieu of plant visitations. A single film may feature one or more of the following subjects: a company's general activities, the manufacture of a specific product or line of products, physical plant and equipment, employee relations, company history, research and exploration, or financial operations. Most industrial films possess professional production qualities and are entertaining as well as educational. They are prepared to tell a story to the workers, stockholders, and the public. Advertising is usually held to a minimum.

Motion pictures are in many instances superior to a plant visitation. They can bring together a series of widely dispersed operations; consequently a student will see more of a plant's operation in a 50 minute film than he could observe in several days in a plant. Operations are photographed from the most advantageous viewpoints and in those cases where the operation itself can not be filmed drawings may be used. Movies make it possible to bring to students types of industrial activities which are foreign to their locality. The films may be presented during regular class

hours and can be tied in with a class discussion. All or a part of the film may be repeated if desired.

A few schools are taking full advantage of the possibilities in the use of industrial films. They are scheduled for showing in an auditorium at certain hours and all students are notified of the picture to be presented by the use of posters and class room announcements. Student attendance may be optional except in those cases when a film is on a specific topic that applies to a particular class.

Nearly all industrial films are 16 mm, most are sound and many are in color. They are easy to obtain and the cost is usually limited to transportation charges as most companies are anxious to have their films exhibited. Suitable projection equipment, a 16 mm sound projector and screen, can be obtained at a comparatively low cost. Any class room that can be darkened somewhat can be used for the projection.

For those who may be interested in the possible use of industrial films the following reviews are presented:

COPPER MINING, SMELTING AND REFINING
35 minutes, 16 mm. sound, color.
Distributor: Anaconda Copper Mining Company
Advertising Department
Room 2148
25 Broadway
New York 4, New York

This picture shows the details of the mining, smelting, and refining of copper. At Butte, Montana the camera has recorded the underground mining, drilling, timbering, and blasting operations. It has also recorded the methods of moving the ore to the surface where it is loaded in cars to be carried to Anaconda. There the film shows the ore being crushed and ground and sent through the flotation process. The material is shown going through the furnaces and other processes to come out as blister copper. The blister copper is followed to Great Falls where it is shown going through the processes to convert it to 99 per cent pure copper and cast it into commercial shapes. The film points out the by-products produced and their importance to the company. The operations are shown in great detail and where an operation could not be photographed animation has been used. The pictures are accompanied with an excellent description of the operations.

DEEP HORIZONS
45 minutes, 16 mm. sound, color.
Distributor: The Texas Company
135 East 42nd Street
New York 17, N. Y.

This is the story of an oil well. The film shows all of the steps that are taken to discover a new field and bring in a well. It starts with the surveying crew and then proceeds to the work of the seismograph group which maps the underground structure. The film shows and explains how the map is used to determine where to drill the well and what depth to drill. The drilling and testing of the well are shown and explained in detail. The picture proceeds with the placing and cementing of the casing and bringing in the well. As a side trip, the film shows how drilling is done in the Gulf of Mexico.

MAGAZINE MAGIC
35 minutes, 16 mm, sound, color.
Distributor: Curtis Publishing Company
Motion Picture and Speakers' Bureau
Independence Square
Philadelphia 5, Pa.

This film is concerned with the story of the production of the ***Saturday Evening Post, Ladies' Home Journal, Holiday, Jack and Jill,*** and ***Country Gentleman.*** It

shows the making of a magazine from the pulpwood to the finished product. The careful planning necessary for production is shown. The editors are shown at work on the stories and articles. Artists are pictured at work on covers and illustrations and their creations are followed through the steps necessary to get them reproduced on a cover or in a magazine. The careful blending and matching of printing ink is pictured and explained and the great presses are shown at work. This is a very interesting film and after seeing it the viewer will have a good knowledge of magazine production.

UNFINISHED RAINBOWS
36 minutes, 16 mm, sound, color.
Distributor: Aluminum Company of America
Motion Picture Department
801 Gulf Building
Pittsburgh 19, Pa.

This is a documentary film showing the work of Mr. Hall, a young chemist, in his successful attempt to find an economical process for refining aluminum. The picture traces the difficulties encountered in marketing aluminum and this company's solution to the problems. The film shows how new uses for aluminum were developed through research and how the company found markets for its products. It is an excellent presentation of the growth of the company from a very small to a very large enterprise.

UNFINISHED BUSINESS
25 minutes, 16 mm, sound.
Distributor: New York Film Distribution Center
United States Steel Corporation of Delaware
71 Broadway
New York 6, New York

The film shows what United States Steel has been doing since the end of the war toward expansion and production. The audience is taken on a sightseeing trip through various plants throughout the country. During this trip they see the phases of steel production from iron ore to finished product. The film also shows how the United States Steel Company is carrying out its expansion program.

SOME SUGGESTIONS ON THE TEACHING OF PRINCIPLES OF ACCOUNTING

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The writer has tried several methods in getting the contents of a chapter on accounting principles across to the students. These methods have included: (a) a lecture on the accounting theory in the chapter on the day that the chapter was assigned, thus in advance of the student's study of the material; (b) lecturing on the concepts and standards involved after the student is supposed to have studied the reading assignment; (c) the combination lecture-discussion method wherein the student is first asked to give his views and ideas on a theory, followed by the professor's re-emphasis of certain points and the elaboration on others.

The method that I have used most recently and which has brought the most gratifying results is the procedure of building the lecture and discussion around an appropriate problem. Sometimes the problem can be found in the text, and other times it is necessary to design one of my own.

The problem needs to be short enough and yet as inclusive as possible in regard

to the theories to be discussed. Students are asked to contribute to the solution of the problem as the solution is being developed on the board. Definitions, procedures, and various theories on a particular point are brought to the student as the solution progresses.

If it is something on which the student should take notes, enough time is allowed so that he can write intelligent and meaningful notes. I believe we instructors are sometimes inclined to forget that it is not how much we talk that counts but rather what the student actually absorbs from what we say. I do not believe that as a rule it is wise to have the student copy the problem that is being developed, because he becomes too absorbed in the mechanics of writing and does not do enough thinking, particularly if he gets behind with copying the problem being developed.

The following is a typical example of the use of a problem around which the lecture and discussion are built.

The chapter assigned in the text included a discussion of the recording of subscriptions to capital stock, the issuance of stock at a premium or a discount, the work of the registrar and transfer agent, and the records required by a corporation. The following problem was selected as a basis for the lecture and discussion.

The Problem

The Adams Corporation was organized on February 1, 1949. The capital stock authorized consisted of 10,000 shares of common stock, par value $25, and 2,000 shares of preferred stock, par value $100. Subscriptions are taken under the following terms: 25% cash with subscription; 25% cash in ten days; balance within thirty days. Stock is issued when fully paid for. The following transactions occurred during February:

Feb. 1. Received subscriptions at par for 4,000 shares of common and 1,000 shares of preferred.

Feb. 7. Received subscriptions for 2,500 shares of common stock at $27.

Feb. 11. Received cash per agreement for stock subscriptions of Feb. 1.

Feb. 17. Received cash per agreement for stock subscriptions of Feb. 7.

Feb. 23. Received subscriptions for 500 shares of preferred stock at $95.

Feb. 27. Received subscriptions for 1,000 shares of common stock at $30.

Feb. 28. Received cash per agreement for stock subscriptions of Feb. 1. Issued the stock.

Instructions: Record the above facts and transactions directly in "T" accounts.

Classroom procedure might then proceed along the following lines. Students are first requested to read the problem carefully. Student A is then asked to state the debits and credits which should be entered in the "T" accounts to record the stock authorization. Student B may be asked if he considers the information given by Student A to be the most desirable way to make the entry or if he has a better suggestion. The proper entry is then posted to the "T" accounts on the board by the instructor. At this time the instructor points out the desirability of recording information in the accounts regarding the stock authorized and the need for presenting this information in the balance sheet.

Student C is next asked to give the debits and credits to be used in recording the subscriptions at par for common and preferred stock. The instructor then discusses with the students the use of the subscription book, the subscriber's ledger, and various regulations in regard to subscriptions.

As the entries regarding subscriptions for stock below and above par are given and discussed, the factors involved in connection with the issuance of stock at a premium or a discount are treated by the instructor. For example, the possible liability attached to the issuance of stock at a discount, the legality of the stock issue, etc., are pointed out.

Students are then asked to give entries to record the cash received. This again provides a point at which some supplementary material can be brought to the class such as the use of installment accounts in connection with subscription agreements, the factors involved in the cancellation of subscription agreements, etc.

As the final entries regarding the issuance of the stock are presented, the stock certificate book, stockholder's ledger, the work of the registrar and transfer agent, and the exchange of stock are discussed.

In a problem of this kind, from ten to twelve minutes are spent on each main phase of the problem. The discussion should be so guided that the whole class period is not spent on just one of the main topics, e.g., the authorization of the capital stock.

In those cases where the subject matter to be covered cannot be dealt with by means of a problem, I often adopt the following method: The combination lecture-discussion method is used, but this is supplemented by an outlining of the main points on the board as the discussion of the subject progresses. This helps to prevent a student from leaving class feeling that a lot of ground has been covered and yet feeling confused and not sure of the main points or the conclusions reached.

Some instructors feel that they should not spend any time in class discussing assigned problems. It is my opinion that we should devote a little more time to a discussion of the homework.

First, I believe that when problems are assigned, a few minutes should be taken to point out the peculiarities and to give some hints regarding the solution where it is rather obvious that the problem will give the student considerable difficulty.

Next, the student should be given some opportunity in class to ask questions regarding the homework.

If the homework is corrected by readers, the instructor should not fail to review the homework so that he can find out the types of errors made by the student. Even though the student sees the errors on his paper when it is returned to him, and even if he is requested to make the corrections and return the paper, it is still helpful to discuss briefly with the students the types of errors made by several members of the class.

Where it is possible to anticipate the types of errors the student will very likely make, I believe that we should do everything possible, without detracting from the student's initiative, to make his first impression the correct one.

It may also be well to summarize at this point the factors which are found to be very helpful toward the encouragement of class participation:

(1) The students are asked to contribute to the solution of the problem being developed on the board. Alternative views are welcomed.

(2) The homework, which is of vital interest to the student, is discussed. A student is asked, for example, to state or demonstrate how the proprietorship section appears on his balance sheet. Other students make comparisons with their work and inquire as to the acceptability of their presentation.

(3) Assume, for example, that we are going to discuss contingent liabilities. The students are first asked what points they think should be covered in a discussion of the subject. These points are put on the board. The student then feels more a "part of the game" and that it is *his* discussion.

(4) I frequently ask the students if they have any questions on the subject before the discussion on a particular subject is dropped. The students are made to feel free to ask questions by never ridiculing their questions or being harsh or sarcastic in my reply. Other students are

sometimes called upon to answer the question. If the instructor replies to the question, he should not as a general rule spend so much time on the matter that a big share of the class period is devoted to just that one question. This is a frequent criticism of instructors by students, and when such a condition exists, the students will either fail to ask questions, or deliberately "get the professor going on one subject" so that they themselves will not have to do anything for the rest of the class period.

AN EDUCATIONAL EXPERIMENT IN COST ACCOUNTING

Bertram Broder
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Introducing the college student to cost accounting is a difficult feat, especially as most undergraduate schools of business allot only one semester to this technical phase of accounting. Thus, the instructor must immediately jump into the maze of manufacturing transactions, and hope that his group of "innocents" can overcome their lack of first-hand knowledge of plant operations. Even those students who successfully complete one semester of this technical subject derive only a shallow and mathematically abstract concept of the field.

In an endeavor to blend theory and practice, the writer has been conducting an experiment which is now going through its second year in operation.

In essence, a two-semester course has been instituted commencing with the Fall semester, involving two 2-hour class periods per week. The first semester's outline follows:

1st week—History, Nature, and Scope of Cost Accounting; Cost Classifications and Cost Functions
2nd week—Unit Costs; Basic Records; Factory Ledger; and Coding
3rd week—Material Purchasing and Receiving
4th week—Material Storing and Issuing
5th week—Maxima and Minima Quantities; Material Handling Burden
6th week—Physical Inventories; Over and Short Reports; Market Declines
7th week—Labor Costs
8th week—Payroll Accounting
9th week—Special Labor Problems; Wage Incentives; Social Security; Overtime; Pension Plans; etc.
10th week—Overhead Distribution
11th week—Applied Overhead
12th week—Normal Overhead and Choice of Overhead Rates
13th week—Review of Process Cost Systems and Collection of Students Case Study Reports
14th week—Job Order Cost System
15th week—Review Job Order Cost System and Discuss Selected Case Studies

From the above, it can be seen that the emphasis is placed upon theory, with the student being urged to make use of texts, N.A.C.A. material, and other current periodicals in the library. The high spot in the first semester centers upon the Case Study the student makes of an individual firm. To prevent duplication and the possibility of annoyance of business executives, the instructor must approve the student's selection before any actual contact is made. Although the exact form of the written report depends upon the student's literary style and ingenuity, the following recommendations are usually made:

a. History and nature of the firm
b. Business policies
c. Manufacturing operations (illustrated by factory layout or flow chart)

d. The accounting system (illustrated by flow chart as well as records and forms)
e. Critique (the student's evaluation of the cost system being used as determined by his observations and by the theory he has learned in class). Note: The student is told that a critique may be favorable as well as unfavorable; suggestion is made that the student show his report, before submission to his instructor, to the business executive who has been courteous enough to supply the required data. Several company executives have told the writer that they appreciated some of the students' observations as being constructive; furthermore, they were able to censor such information which they thought should remain confidential. To date, about 60 Case Studies have been made, and it is encouraging to report that both the student and the businessman have, without exception, been enthusiastic about this method of uniting theory and practice.

In the second semester, stress is placed upon problems that enable the student to make use of the theory he has learned. The second semester's outline follows:

1st week—Review Process Costs
2nd week—Review Job Costs
3rd week—Estimated Costs and Job Order Practice Set
4th week—Budgets and Budgetary Control
5th week—Introduction to Standard Costs
6th week—Ideal Standards
7th week—Ideal Standards (continued)
8th week—Ideal Standards (continued)
9th week—Basic Standards
10th week—Differential Cost Analyses
11th week—Accounting for Joint and By Product Costs and Standard Cost Practice Set
12th week—Distribution Costs and Plant Visitation
13th week—Distribution Costs and Report of Plant Visitation
14th week—Special problems
15th week—Review

As seen from the above outline, the writer believes that the proper approach to standard costs is through an adequate knowledge of estimated costs, budgets, and budgetary control. The student is guided through approximately ten problems involving ideal standard costs and then approaches basic standards by reworking a few of the problems he has solved under ideal standards, so that differences in the income statements may be readily ascertained and analyzed.

The highlight of this term's work comes in the 12th week when an out-of-town plant visitation is made to a company actually using standard costs. Round table discussions are held lasting two hours or more. These have proved more valuable than a month of classroom lecturing.

It has also been observed that many students have a number of questions which are still unanswered at the conclusion of each plant visitation. Therefore, it is advisable to have each student write a report of his observations and submit it to the class for further discussion.

Outside the classroom, the Binghamton Chapter of the National Association of Cost Accountants has awarded a year's membership to the student writing the best case study. Also, any student has the privilege to sit in at the Chapter Educational Forums, to join the Association as a Junior member and to come to the Chapter Technical meetings as a guest.

In conclusion, the writer believes that the experiment has been successful. Now, after a year's training in cost accounting, the students have been able to grasp the fact that cost accounting is an important tool of management, not in the abstract, but as a living art making use of scientific methods.

PROFESSIONAL EXAMINATIONS

A Department for Students of Accounting

HENRY T. CHAMBERLAIN

THE following problems were prepared by the Board of Examiners of the American Institute of Accountants and were presented as the first half of the November, 1949 C.P.A. Examination in accounting practice. The candidates were required to solve problem 1 and two of the remaining three problems in four and a half hours. The weights assigned to the problems were: problem 1, 14 points; problems 2, 3, and 4, 18 points each.

A suggested time schedule is given below:

Problem 1	75 minutes
Problem 2	60 minutes
Problem 3	60 minutes
Problem 4	90 minutes

No. 1

The following statements relate to Federal income taxes. You may use the answer sheet included with the problem or you may list the identifying letter and number on workpaper. Opposite each number you are to give the sub-letter which identifies the correct answer. Reasons need not be given to support your answer. Answer all parts. Grade will be based entirely on the number of correct answers you give.

a. 1. If you file your 1948 return by January 15, 1949, using the optional deduction method, you can subsequently change and use the actual deductions. (a) True, (b) False.
2. If a dependent is 65 years old or over, an exemption of $1,200 can be obtained—the regular $600 exemption plus $600 old age exemption. (a) True, (b) False.
3. An accounting firm requires some of its employees to attend school and pays their book and tuition expenses. These expenditures are includible in gross income by the employees. (a) True, (b) False.
4. An employee in 1949 is given a bonus for services performed in 1947. Withholding tax must be deducted at 1947 withholding rates. (a) True, (b) False.
5. A corporation does not realize gain or loss on the distribution of its assets in a complete liquidation. (a) True, (b) False.
6. The exercise of the right to convert bonds into stock of the same corporation is not treated as the sale or exchange of the bond resulting in gain or loss. (a) True, (b) False.
7. A corporation owns land which cost it $10,000 but is now worth $40,000. If the land were sold to the stockholders for $10,000, no taxable income could result to either the corporation or the stockholder. (a) True, (b) False.
8. Record keeping requirements are met if the taxpayer keeps microfilmed copies of payroll records, invoices, cash books, ledgers, etc. (a) True, (b) False.
9. If an annuity is purchased, the annual payments to the annuitant are tax-exempt until the cost of the annuity is recovered. (a) True, (b) False.
10. An individual sells several parcels of real property on which he could use the installment basis. If the installment basis is adopted for one parcel, it must be used for all sales. (a) True, (b) False.

b. The following constitute taxable income to a taxpayer filing a return on a cash basis for the calendar year 1948:
1. Bond coupons payable on December 1, 1948, but not collected by the taxpayer until January 1949. (a) True, (b) False.
2. Salary received for work as a public school teacher. (a) True, (b) False.
3. $1,200 voluntarily paid by a corporation to the taxpayer, a widow of a former employee. (a) True, (b) False.
4. Amount received from a friend by a taxpayer for temporary rental of his home for a few months. (a) True, (b) False.
5. Taxpayer, owing Jones $600, does certain work for him, in consideration of which, Jones, on June 30, 1948, cancels the obligation. (a) True, (b) False.
6. $10,001 received as an award in a suit for libel. (a) True, (b) False.
7. Interest received on bonds issued by the State of Mississippi. (a) True, (b) False.
8. Interest received on bonds issued by the City of Chicago, Illinois. (a) True, (b) False.
9. Cash in the amount of $50 received as a prize on a radio quiz program. (a) True, (b) False.

10. Old age benefits of $300 received under the Federal Insurance Contributions Act. (a) True, (b) False.

c. X Corporation was formed in 1921 with capital of $100,000 and to January 1, 1948, had accumulated earnings and profits of $5,000. Adams, an individual, formed X Corporation and has always beneficially owned all the outstanding stock consisting of 1,000 shares of common, par $100, for which he paid par.

Y Corporation was formed in 1928 with capital of $100,000 and to January 1, 1948, had accumulated earnings and profits of $2,000. Baker, an individual formed Y Corporation and has always beneficially owned all the outstanding stock consisting of 1,000 shares of common, par $100, for which he paid par.

The following events subsequently occur.

1. On January 1, 1948, X and Y were consolidated tax-free into Z Corporation which had authorized capital stock of 2,070 shares of common, par $100, of which 1,050 shares were issued to Adams in exchange for his 1,000 shares of X, and 1,020 shares were issued to Baker in exchange for his 1,000 shares of Y. Z Corporation kept books on the accrual basis and for the calendar year.
2. During the first six months of 1948, Z made net profits of $2,000 but lost $968.40 during the last six months, and for the whole of 1948 Z made net earnings of only $1,031.60.
3. Z paid the following dividends: March 31, 1948, $1 per share; June 30, 1948, $1 per share; September 30, 1948, $1 per share; December 31, 1948, 90 cents per share. The total dividends paid were $8,073, of which Adams received $4,095 and Baker received $3,978.
   (1) How much of the amount received by Adams is taxable to him as ordinary income?
   (a) $4,095, (b) none, (c) $4,074, (d) $2,100, (e) $523.28, (f) some other amount.
   (2) How much of the amount received by Baker is taxable to him as ordinary income?
   (a) $3,978, (b) none, (c) $2,040, (d) $508.32, (e) $3,957.60, (f) some other amount.
   (3) On these facts what is the adjusted basis for all Adams' shares of Z on January 1, 1949?
   (a) $100,000, (b) $105,000, (c) $99,979, (d) $98,005, (e) $96,428.28.
   (4) On these facts what is the adjusted basis for all Baker's shares of Z on January 1, 1949?
   (a) $102,000, (b) $98,062, (c) $100,000, (d) $96,530.32, (e) $99,979.60.

d. On January 1, 1948, A accepted the position as manager of the X hotel and, at the request of the owner and solely for purposes of better management, moved into a $75 a month suite in the X hotel which he occupied rent-free. His salary as manager was $450 a month and he rented his own former residence for $90 a month.

During 1948, A paid to his divorced first wife the amount of $1,800 as alimony, the divorced first wife was also obligated to support their child. The decree specified only the amount of annual payment to the first wife, but in oral statements the judge had indicated that he arrived at that figure by allowing $1,400 per year for the wife and $400 for the child.

On December 1, 1948, A pledged $100 as a contribution to his church which he paid on January 15, 1949.

Also on December 1, 1948, A sold certain shares of stock which he had received in 1941 as a gift from his father. The shares had cost his father $1,500, but the fair market value on the date of the gift was $1,000. From the sale of these shares, A received $1,250.

1. During 1948, A's monthly gross income apart from the sale of stock was (a) $615, (b) $540, (c) $525.
2. In his return for 1948, A may deduct alimony in the amount of (a) $1,800, (b) $1,400, (c) 0.
3. If A makes no other payments to or for the benefit of his child by his first marriage, that child may be claimed as a dependent by (a) A, (b) A's first wife.
4. If A makes no contributions other than the one to his church, he may deduct in his return for 1948 as a charitable contribution the amount of (a) $100, (b) 0, (c) $66.67.
5. On the sale of the stock, A realized (a) long-term capital gain of $250, (b) long-term capital loss of $250, (c) no gain or loss, (d) long-term gain of $1,250.

e. The Parlor City Pop Company is engaged in the manufacture and bottling of soft drinks. The company delivers its products to its distributors in 6-oz. glass bottles, 24 to a case. The company sells the bottles to its distributors for 1¢ each, in addition to the cost of the contents, under agreements to repurchase the bottles when returned. Each bottle costs the company 8 mills. The company also charges its distributors 5¢ for the use of each case delivered but retains title to the cases, the 5¢ charge being refunded for each case returned in good condition. Each case costs the company 4¢.

The company bills its distributors monthly allowing "2, 10; net 30," and over a period of years it has been the company's experience that discounts will be taken on 70% of dollar volume of sales of soft drink contents.

The company keeps books on the accrual basis and for the calendar year. During 1948, the company sold one million cases of bottled drinks, receiving in addition to the price of the contents, $240,000 from the sale of the bottles and $50,000 for the use of cases. Twelve million bottles were returned during the year, for which the company paid out $120,000. Also 500,000 cases were returned in good condition, for which the company paid out $25,000, although the company's experience was that 90% of all cases are returned during each year.

The company also found that during 1948 discounts were taken on 60% of sales and that discounts were allowed in the amount of $7,200 instead of $8,400 as expected from experience.

In its Federal income tax returns for 1948:

1. The company must report gross sales in respect of the sale of bottles in the amount of (a) $240,000, (b) 0, (c) $48,000, (d) $120,000, (e) some other amount.
2. The company must report gross income in respect of the use of cases in the amount of (a) $50,000, (b) $1,000, (c) 0, (d) $5,000, (e) some other amount.
3. In respect of discounts the company may (a) deduct $8,400 addition to reserve for cash discounts, (b) deduct $7,200 actually allowed, (c) some other amount.

f. When William Smith was elected president of the Iron & Steel Company, it became necessary for him to remove himself and his family from their home in Petroleum, Indiana, to Chicago, Illinois. In moving on January 1, 1948, Smith incurred $400 travel expenses for himself and $600 for his wife and two small children. It was also necessary for Smith to sell his house in Petroleum and buy a new house in Chicago. Smith had been re-

luctant to accept the job because he knew that he would take a large loss on the sale of his house; so The Iron & Steel Company, in order to induce Smith to accept, agreed to reimburse him for any loss on the sale of his house. Under this agreement, the company reimbursed Smith in the amount of $10,000.

Smith found that when he moved he would have no place to put up the elaborate playground equipment he had purchased several years previously for his children and so he gave the equipment to the Wells County Children's Home, a charitable institution. The equipment had cost $500, but on the date of the gift had a fair market value of $2,000. Smith's adjusted gross income for 1948 will be in excess of $50,000.

In preparing his 1948 return:

1. In respect of travel expenses, Smith may deduct (a) $400, (b) $1,000, (c) 0.
2. In respect of the payment by the company of $10,000 reimbursement of his loss on the sale of his house, Smith must include as income the amount of (a) $10,000, (b) 0.
3. In respect of his gift of the playground equipment (assuming he made no other charitable gifts during 1948) Smith may deduct (a) $500, (b) $2,000, (c) some other amount.
4. In respect of the gift to charity, Smith must include long-term capital gain of (a) $1,500, (b) $2,000, (c) 0.

No. 2

P and R have been operating a business for several years as partners, during which time they have divided profits equally. They need additional capital to expand their business and have agreed to admit B to the partnership as of January 1, 1949, with a one-third interest in profits and in the capital, he to pay cash into the business as additional capital in an amount equal to one-half of the combined capital of the present two partners, redetermined as follows:

The average partnership profits, after partners' salaries, for the past two years, are to be capitalized at the rate of 10% per annum, which will redetermine the aggregate capital of the two present partners. Before such capitalization of profits, the accounts are to be adjusted for errors and omissions.

The business has not followed a strict accrual basis of accounting. As a result the following items have been omitted from the books:

Item	*Balance 12/31/46*	*Balance 12/31/47*	*Balance 12/31/48*
Accrued expenses	$3,201	$2,472	$4,360
Prepaid expenses	1,010	1,226	872
Accrued income	—	250	475

In addition, no provision has been made for loss on uncollectible accounts. It is agreed that a provision of $4,500 is needed as of December 31, 1948, of which $600 is for 1947 accounts. Charge-offs have been made to expense in 1946 of 1945 and prior accounts—$1,200; in 1947 of 1946 accounts—$3,100, and of 1947 accounts—$400; in 1948 of 1947 accounts—$2,280, and of 1948 accounts—$525.

The inventory at December 31, 1948 contains some obsolete goods carried at cost of $4,300. A 20% write-down is to be made to reduce these items to their present value.

In 1947 and 1948, salaries of $3,000 for each partner were taken out of the business and charged to expense before determining profits. It has been agreed that the salaries should have been $4,000 each.

The following financial data are available:

Balance-Sheet
December 31, 1948

Cash	$ 7,000	Accounts payable	$ 43,200
Accounts receivable	42,500	Notes payable	25,000
Notes receivable	6,000	Reserve for depreciation of fixtures	5,300
Merchandise	64,000	P capital	22,000
Store fixtures	12,400	R capital	36,400
	$131,900		$131,900

	1946	1947	1948
Profit per books	$ 8,364	$ 8,585	$10,497
P capital	20,000	24,000	22,000
R capital	25,000	33,000	36,400

You are to show the computation of the amount that B will pay into the partnership, and prepare a balance-sheet as it would appear after adjustment for errors and omissions and after redetermination of capital accounts and receipt of B's capital contribution as of January 1, 1949.

No. 3

The E.A.P. Company is engaged in manufacturing. Its products are made principally from one raw material, and in order to insure uninterrupted production, it normally maintains a substantial inventory of the raw material. Because of advancing prices, the company in 1944 adopted the last-in first-out method of pricing out its material requisitions, and thereafter valued its inventory at the prices shown by its perpetual inventory records.

As of December 31, 1947, the inventory consisted of 380,000 pounds carried on its books at an average price of $.90 per pound. The market price at December 31, 1947 was $1.50 per pound. As of December 31, 1948, the inventory was 420,000 pounds with a market price of $1.60 per pound. This was carried at the prices shown on the stock records, 270,000 pounds of this being valued at $.90 per pound and the remainder at prices which averaged $1.54 per pound. The purchases during the year were also made at an average price of about $1.54 per pound.

The operating accounts for the year ended December 31, 1948 included the following:

Sales	$2,100,000
Work-in-process inventory January 1	146,600
Finished goods inventory January 1	90,000
Direct labor	344,000
Cost of material used	1,217,000
Manufacturing overhead	302,000
Work-in-process inventory December 31	180,000
Finished goods inventory December 31	100,000

On March 30, 1949, the warehouse in which the raw material inventory was stored was badly damaged by fire. The stock records were destroyed, but from other records the following figures were obtained:

Sales to March 30	$820,000
Purchases of material	551,425
Direct labor	132,400
Manufacturing overhead	117,600
Work-in-process inventory March 30	175,000
Finished goods inventory March 30	105,000
Salvage value of damaged materials	25,000

The purchase price of raw material during the three months had averaged $1.61 per pound with the price on March 30 at $1.62 per pound. The sales price during the period had varied only with the current material, labor and overhead cost existing at date of acceptance of the order, as is normal in this business.

You are to determine the amount of a claim for fire loss, assuming full insurance coverage. Show all computations to support your claim.

No. 4

The City of M has prepared its balance-sheet as of June 30, 1949, and shows therein a surplus of $258,216. The statement has been criticized as not giving a satisfactory reflection of the financial position of the city. You are asked (a) to revise the statement in accordance with acceptable methods of governmental accounting, and (b) you are to provide an analysis of the changes in current fund surplus for the year ended June 30, 1949. You may prepare your revised balance-sheet in columnar form if you prefer to present it in that manner.

The balance-sheet as prepared, together with a corresponding statement as of June 30, 1948, is as follows:

ASSETS	*Balance 6/30/48*	*Balance 6/30/49*
Cash	$ 20,485	$ 2,873
Taxes receivable	54,200	36,690
Accounts receivable	12,362	13,584
Investments	42,000	42,000
Prepaid expenses	6,487	5,374
Fixed assets	696,565	710,465
Total	$832,099	$810,986
LIABILITIES		
Warrents payable	$ 30,900	$ 46,970
Bonds payable	490,000	480,000
Reserve for depreciation	22,300	25,800
Surplus	288,899	258,216
Total	$832,099	$810,986

Additional information is available as follows:

(a) Taxes levied for the year ended June 30, 1949 amounted to $64,300, of which amount $37,600 was collected and $650 abated. Abatement of prior years' taxes was $3,108. It is anticipated that an additional $1,350 of the 1948–49 levy will finally be uncollectible and that an additional $3,500 of 1947 and prior taxes will prove uncollectible.

(b) Revenue other than from taxes was $20,210, but of this amount $4,300 was collected for other governments and has not been paid nor set up as a liability and $1,200 was from interest on investments. The investments are held in trust, the income to be used for library upkeep. Included in expenditures is $3,050 which is the cost of library upkeep for the year.

(c) Expenditures amounted to $153,400 during the year. Included herein is interest on bonds of $15,000, purchase of general fixed assets of $18,900, retirement of general obligation bonds of $10,000 and the abatement of this and prior years' taxes. The $10,000 of bonds and the $18,900 of assets purchased were also credited to surplus and debited to bonds payable and fixed assets.

(d) Included in fixed assets is $174,964 as of June 30, 1948 and $169,964 as of June 30, 1949 of property of the municipal water plant. The revenue of the plant and the expenses, including depreciation of $8,500 and bond interest on $90,000 of 3% bonds outstanding against the plant, have been netted, and the profit of $9,307 has been transferred to surplus. The reserve for depreciation, the accounts receivable and the prepaid expenses at both balance-sheet dates are appreciable to the water plant operations. Also $5,025 in 1948 and $8,750 in 1949 of the warrants payable are applicable to this department. The cash arising from the department's operations except for $500 of working fund, is used for general purposes of the city.

Solution to Problem 1

1. a. 1. (a) True—The last return filed prior to the due date, March 15, 1949 is the actual return recognized by the Treasury Department. It is the election in this last return which is binding.

2. (b) False—The additional exemption of $600 is applicable only to the taxpayer and his spouse when a joint return is filed. In no case does it apply to dependents.

3. (a) True—Although board and lodging given to the employee solely for the benefit of the employer is not taxable income, tuition and books supplied to employees is taxable even though furnished to employees for the benefit of the employer.

4. (b) False—The date wages are actually or constructively paid determines the rate of tax to be withheld regardless of when wages were earned.

5. (a) True—No gain or loss is realized by a corporation from the mere distribution of its assets in kind in

partial or complete liquidation, notwithstanding the appreciation or depreciation in value since their acquisition.

6. (a) True—Where the owner of a bond exercises the right, provided for in the bond of converting the bond into stock in the obligor corporation, such transaction does not result in a realization of profit or loss, the transaction not being closed for purpose of income taxation until such stock is sold.
7. (b) False—Corporate assets sold to stockholders at less than fair market value constitute a dividend to the stockholders to the extent of the excess over sales price. Likewise, the corporation is held to have realized a gain to the extent of the excess of fair market value over cost.
8. (b) False—Microfilm records.—I.T. 3866 states that the Bureau will not object to the retention by taxpayers of only microfilm reproductions of supporting records provided (1) the films are retained as long as necessary, (2) the taxpayer has facilities for preserving and inspecting the films and (3) the taxpayer is prepared to make transcriptions of any desired films. However, the Bureau will not accept microfilm reproductions of permanent books of account or records, including inventories. Since question includes cash books and ledgers which are permanent books of account the answer should be "false."
9. (b) False—The amount received up to 3% of the cost of the annuity is taxable income; the balance is tax exempt until the full cost has been recovered tax free.
10. (b) False—It is not necessary that the same basis be used for the sale of all lots, but the method followed for any particular lot must be adhered to until the transaction is completed. (G.C.M. 3350, C.B. VII-1, 62; Lee, 6B.T.A. 135.)

1. b. 1. (a) True—The theory of constructive receipt requires the inclusion in income of bond coupons on the the date payable rather than on the date of receipt.

2. (a) True—For 1939 and later years, compensation of officers or employees of a State or its political subdivision, is taxable under Sec. 22(a) as amended by the Public Salary Tax Act of 1939.
3. (b) False—Generally voluntary payments by a corporation to the widow of a former employee are considered in the nature of gifts and are not taxable.
4. (a) True—All income including rental income is taxable unless specifically exempt by the Code; no exemption is granted for temporary income or income received from friends.
5. (a) True—Cash basis taxpayers must include income in the year received in cash *or its equivalent.* The cancellation of a debt is considered the equivalent of cash.
6. (b) False—Damages received for personal injury including injury caused by libelous statements are not income within the meaning of the 16th Amendment.
7. (b) False—Interest upon obligations of a State, Territory or any political subdivision thereof is exempt under Sec. 22(b)(4) of the code.
8. (b) False—Interest upon obligations of a State, Territory or any political subdivision thereof is exempt under Sec. 22(b)(4) of the code.
9. (a) True—Since the amount received resulted from a radio quiz program it is presumed the taxpayer took an active part; hence it is taxable. Under the "Pot of Gold" case the income is not taxable if the recipient takes no part in the program, answers no questions, submits no solutions or labels, etc.
10. (b) False—Insurance benefit payments made to individuals under the Social Security Act are not subject to Federal Income tax.

1. c.

Analysis of Earned Surplus

Earnings of X Corp. (Acquired by Z Corp.)	$5,000.00
Earnings of Y Corp. (Acquired by Z Corp.)	2,000.00
Earnings of Z Corp.	1,031.60
Total	$8,031.60

Dividend	*Taxable*		*Non-Taxable*		*Total*
	Adams	*Baker*	*Adams*	*Baker*	
3/31	$1,050.00	$1,020.00			$2,070.00
6/30	1,050.00	1,020.00			2,070.00
9/30	1,050.00	1,020.00			2,070.00
12/31	924.00	897.60	$21.00	$20.40	1,863.00
	$4,074.00	$3,957.60	$21.00	$20.40	$8,073.00
(1) (c)	$4,074.00				
(2) (e)	$3,957.60				

Basis	*Adams*	*Baker*
Original Cost	$100,000.00	$100,000.00
Less Non-Taxable Dividend	21.00	20.40
	$ 99,979.00	$ 99,979.60

(3) (c)	$99,979.00
(4) (e)	$99,979.60

1. d. 1. (b) $ 540.00—A takes up as Gross Income his salary and rental of his former residence. The suite at the hotel was at request of the owner and for purposes of better management and is not income to A.

2. (a) $ 1,800.00—The divorce decree calls for annual "alimony" payments of $1,800. The oral statement of the judge has no effect on the type of payment. Therefore, the payment for support of the child is controlled by the decree which calls the entire payment "alimony."

3. (b) —A would be entitled to the exemption only if he contributed more than 50% of the child's support. Since under answer #2 above, the payment is alimony he does not contribute to the child's support.

4. (b) $ 00.00—The contribution was paid after the first of the year. The deduction is allowed only in the year of payment, not the year pledged.

5. (c) —No gain or loss. In the case of property acquired by gift, the donor's basis is used if sold at a profit and the lower of the donor's basis or fair market value at date of gift is used if sold at a loss. Since this sale was between these two amounts no gain or loss would be recognized.

1. e. 1. (a) $240,000.00—The gross sales price would be the total sales made during the year's time. The repurchase would affect the cost of sales not gross sales.

2. (b) $ 1,000.00—The gross income would be gross profit realized on sale of cases, i.e. cases not to be returned.

Total Cases Rented	$50,000
Total Cases to be Returned (90%)	45,000
	$ 5,000
Cost of Cases not to be Returned	4,000
Gross Income	$ 1,000

3. (b) $ 7,200.00—Cash discounts are deductible only in the amount actually allowed. No deduction is available for the reserve for cash discounts.

1. f. 1. (c) $ 00.00—Travel expenses of an employee and his family to a place of employment are considered personal expenses and not allowed as deductions.

2. (b) $ 00.00—The amount received by the president, namely $10,000, should be treated as part of the amount realized from the sale of the residence.

3. (b) $ 2,000.00—Gifts of property to a charitable organization are allowable as deductions at the amount of the fair market value at date of gift.

4. (c) $ 00.00—No gain or loss is recognized from a transfer of property by gift notwithstanding the fact that the fair market value at date of gift is more or less than the cost basis.

Solution to Problem 2

P and R

Adjustment of Profits

	1946	*1947*	*1948*
Profits, per books	$8,364.00	$8,585.00	$10,497.00
Accrued expenses:			
December 31, 1946	*3,201.00	3,201.00	
December 31, 1947		*2,472.00	2,472.00
December 31, 1948			*4,360.00
Prepaid expenses:			
December 31, 1946	1,010.00	*1,010.00	
December 31, 1947		1,226.00	*1,226.00
December 31, 1948			872.00
Accrued income			
December 31, 1947		250.00	*250.00
December 31, 1948			475.00
Reserve for uncollectible accounts		*600.00	*3,900.00
Charge offs:			
1946	1,200.00		
1947	*3,100.00	3,100.00	
1948		*2,280.00	2,280.00
Inventory adjustment			*860.00
Salary adjustment		*2,000.00	*2,000.00
Adjusted net profit	$4,273.00	$8,000.00	$ 4,000.00

* Red.

Computation of Amount to be Paid by B

Profits: 1947	$ 8,000.00
1948	4,000.00
Total	$12,000.00
Average profits for 1947 and 1948	$ 6,000.00
Aggregate capital of P and R (10×$6,000.00)	$60,000.00
Payment to be made by B (½ of $60,000.00)	$30,000.00

P, R and B
Capital Accounts
January 1, 1949

		P	*R*	*B*	*Total*
Balances, per books, December 31, 1948		$22,000.00	$36,400.00		$58,400.00
Adjustmeets of December 31, 1948					
Accrued expenses	*$4,360.00				
Prepaid expenses	872.00				
Accrued income	475.00				
Uncollectible accounts	*4,500.00				
Inventory	*860.00				
Partners' salaries	*4,000.00	*6,186.50	*6,186.50		*12,373.00
		$15,813.50	$30,213.50		$46,027.00
Goodwill		6,986.50	6,986.50		13,973.00
		$22,800.00	$37,200.00		$60,000.00
Contribution by B				$30,000.00	30,000.00
Balances, January 1, 1949		$22,800.00	$37,200.00	$30,000.00	$90,000.00

P, R and B
Balance Sheet
January 1, 1949

Assets

Current assets		
Cash	$37,000.00	
Accounts receivable, less reserve for uncollectible accounts, $4,500.00	38,000.00	
Accrued income receivable	475.00	
Notes receivable	6,000.00	
Inventory	63,140.00	
Prepaid expenses	872.00	
Total current assets		$145,487.00
Store fixtures, less reserve for depreciation, $5,300.00		7,100.00
Goodwill		13,973.00
Total assets		$166,560.00

Liabilities

Current liabilities		
Accounts payable	$43,200.00	
Notes payable	25,000.00	
Accrued expenses payable	4,360.00	
Accrued partners' salaries	4,000.00	
Total current liabilities		$ 76,560.00
Capital accounts		
P	$22,800.00	
R	37,200.00	
B	30,000.00	$ 90,000.00
Total liabilities		$166,560.00

Solution to Problem 3

Computation of Gross Profit
Rate on Basis of Current Cost of Materials

Sales			$2,100,000.00	100%
Cost of goods sold (based on current cost):				
Work in process inventory, January 1		$ 146,600.00		
Finished goods inventory, January 1		90,000.00		
Direct labor		344,000.00		
Cost of materials used:				
Per problem	$1,217,000.00			
Adjustment for usage of 110,000 tons at $.64 per ton ($1.54 less $.90)	70,400.00	1,287,400.00		
Manufacturing overhead		302,000.00		
		$2,170,000.00		
Work in process inventory, December 31		$ 180,000.00		
Finished goods inventory, December 31		100,000.00		
		$ 280,000.00	1,890,000.00	90%
			$ 210,000.00	10%

Computation of Raw Material
Inventory at March 30, 1949

Raw material inventory at December 31, 1948 valued at average price of purchases for three months of 1949 (420,000 lbs. @ $1.61)		$ 676,200.00
Work in process inventory, December 31, 1948		180,000.00
Finished goods inventory, December 31, 1948		100,000.00
Purchases (342,500 lbs. @ $1.61)		551,425.00
Direct labor		132,400.00
Manufacturing overhead		117,600.00
Total		$1,757,625.00
Work in process, March 30, 1949	$175,000.00	
Finished goods inventory, March 30, 1949	105,000.00	280,000.00
Cost of goods sold plus ending inventory of raw material		$1,477,625.00
Cost of goods sold (90% of $820,000.00)		738,000.00
Raw material inventory, March 30, 1949		$ 739,625.00

$739,625.00 ÷ $1.61 = 459,394 lbs. on hand at March 30, 1949

Computation of Amount of Insurance Claim

Raw material inventory at time of fire at market value at March 30, 1949 (459,394 lbs. at $1.62)	$744,218.28
Less salvage value of damaged material	25,000.00
Amount of claim	$719,218.28

Solution to Problem 4

CITY OF M
BALANCE SHEET
JUNE 30, 1948

ASSETS	*General Fund*	*Water Fund*	*Property Fund*	*Trust Funds*
Cash	$19,985.00	$ 500.00		
Taxes receivable	54,200.00			
Accounts receivable		12,362.00		
Investments				$42,000.00
Prepaid expenses		6,487.00		
Fixed assets		174,964.00	$521,601.00	
Total assets	$74,185.00	$194,313.00	$521,601.00	$42,000.00

LIABILITIES

Warrants payable	$25,875.00	$ 5,025.00		
Bonds payable		90,000.00	$400,000.00	
Reserve for depreciation		22,300.00		
Fund balances	48,310.00	76,988.00	121,601.00	$42,000.00
Total liabilities	$74,185.00	$194,313.00	$521,601.00	$42,000.00

The following journal entries are to record the transactions for the year ending June 30, 1949.

GENERAL FUND

(1)		
Taxes receivable	$ 26,700.00	
Cash	37,600.00	
Revenue from taxes		$ 64,300.00
To record taxes levied and collected for 1948–1949		
(2)		
Revenue from taxes	$ 650.00	
Taxes receivable		$ 650.00
To record abatements of 1948–1949 taxes		
(3)		
Revenue from taxes	$ 1,350.00	
Reserve for uncollectible taxes		$ 1,350.00
To provide for uncollectible taxes of 1948–1949		
(4)		
Fund balance	$ 3,500.00	
Reserve for uncollectible taxes		$ 3,500.00
To provide for uncollectible taxes of prior years		
(5)		
Fund balance	$ 3,108.00	
Taxes receivable		$ 3,108.00
To record abatement of prior years' taxes		
(6)		
Cash	$ 20,210.00	
Other revenues		$ 14,710.00
Reserve for library expenses		1,200.00
Due to Trust Fund		4,300.00
To record collections of other revenues		
(7)		
Expenditures	$148,442.00	
Reserve for library expenses	1,200.00	
Cash		$137,297.00
Warrants payable		12,345.00
To record expenditures		
(8)		
Cash	$ 21,423.00	
Revenue of Water Department received		$ 21,423.00
To record cash received from Water Department		
(9)		
Cash	$ 40,452.00	
Taxes receivable		$ 40,452.00
To record collections of prior years' taxes:		

Balance 6/30/48	$ 54,200.00
Levy for 1948–1949	64,300.00
Total	$118,500.00
Cash collected 1948–1949 levy	$ 37,600.00
Abatements	3,758.00
Balance 6/30/49	36,690.00
Total	$ 78,048.00
Collections of prior years' taxes	$ 40,452.00

TRUST FUNDS

Due from General Fund	$ 4,300.00	
Due to other governments for taxes collected		$ 4,300.00
To record amount owing other governments		

FIXED PROPERTY FUND

(1)

Fixed Assets	$ 18,900.00	
Fund balance		$ 18,900.00
To record new fixed assets purchased		

(2)

Bonds payable	$ 10,000.00	
Fund balance		$ 10,000.00
To record retirement of bonds		

WATER FUND

(1)

Cash	$ 21,423.00	
Accounts receivable	1,222.00	
Prepaid expenses		$ 1,113.00
Reserve for depreciation		8,500.00
Warrants payable		3,725.00
Fund balance		9,307.00
To record results of operations for year		

(2)

Reserve for depreciation	$ 5,000.00	
Fixed assets		$ 5,000.00
To record fixed assets written off		

(3)

Fund balance	$ 21,423.00	
Cash		$ 21,423.00
To transfer cash to General Fund		

CITY OF M
BALANCE SHEET
JUNE 30, 1949

ASSETS	*General Fund*	*Water Fund*	*Property Fund*	*Trust Fund*
Cash	$ 2,373.00	$ 500.00		
Taxes receivable, less reserve for uncollectible taxes, $4,850.00	31,840.00			
Accounts receivable		13,584.00		
Investments				$42,000.00
Prepaid expenses		5,374.00		
Due from other funds				4,300.00
Fixed assets		169,964.00	$540,501.00	
Total Assets	$34,213.00	$189,422.00	$540,501.00	$46,300.00
LIABILITIES				
Warrants payable	$38,220.00	$ 8,750.00		
Bonds payable		90,000.00	$390,000.00	
Reserve for depreciation		25,800.00		
Due to other funds	4,300.00			
Due to other governments				$ 4,300.00
Fund balances	*8,307.00	64,872.00	150,501.00	42,000.00
Total liabilities	$34,213.00	$189,422.00	$540,501.00	$46,300.00

* Deficit.

CITY OF M
STATEMENT SHOWING CHANGES IN CURRENT SURPLUS
JULY 1, 1948 TO JUNE 30, 1949

Revenues:				
From taxes		$64,300.00		
Less: Abatements of 1948–49 taxes	$ 650.00			
Provision for uncollectible 1948–49 taxes	$1,350.00	2,000.00	$62,300.00	
Other sources			14,710.00	
Water department income received			21,423.00	
Total income				$ 98,433.00
Expenditures				148,442.00
Excess of expenditures over revenues for year ended June 30, 1949				$ 50,009.00
Adjustments related to prior years:				
Abatement of prior years' taxes			$ 3,108.00	
Provision for uncollectible taxes of prior years			3,500.00	6,608.00
Decrease in current surplus, year ended June 30, 1949				$ 56,617.00

ASSOCIATION NOTES

E. Burl Austin

DISTRICT OF COLUMBIA

American University:

Eugene C. Moyer has resigned as head of the Accounting Department to engage in public accounting practice, but will continue with the University as lecturer.

New appointments include: Norman F. Lehrman as associate professor and Alan Johnson as assistant professor.

ALABAMA

M. F. Barno was recently appointed to the Committee on Bureau Practice and Procedure of the American Bar Association.

William H. Whitney has been appointed to the Alabama Society's Committee on Education.

University of Alabama:

S. Paul Garner has been elected Secretary-Treasurer of the Alabama Society of CPA's.

CALIFORNIA

University of Southern California:

Walter Meigs served recently as chairman of the accounting section at the meeting of the Pacific Coast Economic Association.

George T. Altman has in recent months given addresses on tax matters to the Pomona Valley Bar Association, the American Society of Women Accountants, the California Society of CPA's, the Life Insurance and Trust Council of Los Angeles, and the National Tax Association.

University of Santa Clara:

The staff includes: O. Robert Anderson, chairman of the department, Phillip N. Allen, assistant professor, and Louis F. Boitano, instructor.

Santa Barbara College:

J. F. Halterman was visiting professor of accounting at San Francisco State College during the summer session. He is on sabbatical leave for the fall semester.

FLORIDA

University of Florida:

William R. Matthies has been appointed associate professor.

Milton S. Boyce has been appointed teaching assistant.

Recent staff promotions include: Harvey T. Deinzer to professor; E. G. Peterson to professor; Louis Nola to assistant professor; and W. Davis Parker to assistant professor.

IOWA

Drake University:

Felix Kaufman has been appointed instructor.

M. B. Dilley recently addressed the Des Moines chapter of the Iowa Society of CPA's on the subject of university education for accounting from the standpoint of the public accountant.

ILLINOIS

Southern Illinois University:

Lewis A. Bartley has been appointed instructor.

Van Buboltz is on leave of absence for the current year.

University of Illinois:

Daniel Borth has returned to the campus as professor of accounting and Associate Dean of the College of Commerce from his position as consultant to the Bureau of the Budget in Washington.

A. C. Littleton recently read a paper for the open meeting of the Graduate Course in Accounting Theory at the University of Chicago.

H. L. Newcomer has been appointed a member of the University's Senate Committee on Budgets.

C. A. Moyer has been selected as co-editor of the Wiley Accounting series of textbooks.

W. G. Kell recently passed the CPA examination.

H. T. Scovil was selected for the annual award for "outstanding service to the accounting profession" by the American Institute of Accountants at the annual meeting in Los Angeles on November 1, 1949. This is the first time an educator has been given this award.

Professor Scovil has been head of the Department of Business Organization and Operation at the University of Illinois since 1917, was the first educator on the Board of Examiners for the National Certified Public Accountant examination,

has served on a number of Institute committees, has been editor of the Wiley Series of accounting textbooks for the past twenty-five years, served on the Board of Editors of "Contemporary Accounting," and was one of the principal organizers and a past president of the American Accounting Association.

MARYLAND

University of Maryland:

Recent resignations include: Ralph Cohen, D. Gruber, John McKiever, and Jean Messer.

Staff additions include: William P. Castle, W. R. Fleming, John P. Devereaux, Harold E. Griffin, and T. R. Larimore.

Howard Wright assisted the Controller of E.C.A. for several months this year.

John A. Daiker recently passed the CPA examination.

MICHIGAN

University of Michigan:

Members of the staff who have recently left are: S. Davidson, R. W. Gibson, W. D. LaBaw, R. B. Driver, R. B. Phillips, D. L. Rehberg and R. M. Roberts.

New appointments include: Mary N. Barron, Richard L. Brummet, Albert H. Cohen, Samuel R. Hepworth, Daniel L. Sweeney, David A. Thomas, and Roland F. Salmonson.

W. A. Paton addressed the Accountants' Graduate Study Conference at Stanford University in June.

H. F. Taggart addressed the NACA Regional conference at Buffalo on the subject of pricing and costing in a competitive economy.

Herbert E. Miller, recently promoted to professor of accounting, spent the summer in China for E.C.A.

Michigan State College:

B. C. Lemke has joined the staff as professor of accounting, and S. B. Mead has returned to the staff.

Bruce Futhey recently addressed the Fort Wayne NACA chapter and the Detroit chapter of the Institute of Internal Auditors on analysis of accounting statements.

John W. Ruswinckel is serving on the educational committee of the Michigan Association of CPA's.

MISSISSIPPI

Mississippi State College:

Recent additions to the staff as instructor include: Bert B. Hollingsworth and Leonard A. Robinson.

Resignations include: Allen R. Galloway, Edward R. Schweizer, and Ralph S. Wofford.

Edwin C. Brown has been appointed chairman of the committee on accounting and auditing procedures of the state Society, and W. W. Littlejohn is a member of the Board of Governors of the Society, and of the Jackson chapter of NACA.

NEBRASKA

Creighton University:

Raymond D. Shaffer has been promoted to assistant professor.

NEW JERSEY

Rutgers University:

The University was host in September to a graduate study conference for accountants on financial reporting. Outstanding speakers included Virgil S. Tilly, Tulsa, Paul Grady, New York, Edward B. Wilcox, Chicago, and Samuel J. Broad, New York.

NEW YORK

University of Rochester:

A. B. Dickerman has resigned to go to the Syracuse University.

Long Island University:

Recent staff promotions include: Ephriam D. Dworetsky, Philip B. Kravitz, and Philip Wolitzer—all of whom have been appointed assistant professors.

OHIO

Miami University:

Glen G. Yankee has been appointed associate professor.

OKLAHOMA

Oklahoma A & M College:

Philip Meyers and J. W. McSwain recently passed the CPA examination.

OREGON

Oregon State College:

Byron L. Newton has returned to Oregon State College as associate professor.

William L. Ulrich has been appointed assistant professor.

Ralph L. Boyd addressed the Controllers

Institute, Portland Control, on the subject of controllers' budgetary procedures.

C. E. Maser addressed the Pacific Coast Controllers conference on higher education and training for controllership.

PENNSYLVANIA

University of Pennsylvania:

Recent resignations include: Arthur T. Cameron.

Robert G. Cox has been promoted to assistant professor.

Newly appointed are: Rufus Wixon to be professor of accounting; Louis R. Larsen and Robert V. Luongo to be instructors.

Lehigh University:

Recent resignations include: Robert D. Mustain, Louis C. Jurgensen, and Hugh O. Roberts.

Elmer C. Bratt delivered the Sloan Foundation lectures at the University of Colorado in May.

New appointments as instructor include: John P. Ondrechen, John W. Dixon, and H. W. Woodke.

University of Pittsburgh:

Robert D. Ayars taught at the University of Utah during the summer and is on leave for the current year.

C. L. Van Sickle has been appointed general chairman of the regional cost conference of NACA to be held in Pittsburgh in 1950.

TEXAS

Texas A and M College:

E. C. Cass has been granted a leave of absence to accept temporary appointment at the University of Alabama.

E. S. Packenham has been promoted to assistant professor.

UTAH

University of Utah:

Recent appointments, both as assistant professor, include Webster W. Decker and Arthur H. Johnson.

Brigham Young University:

Robert J. Smith was recently appointed assistant professor.

WASHINGTON

State College of Washington:

Donald L. Raun has been appointed instructor to fill the vacancy caused by the death of Chester R. Ham.

Theodore R. Saldin has been promoted to assistant professor.

WEST VIRGINIA

West Virginia University:

William Slocum and Albert F. Beers have been appointed instructors. The staff also includes three CPA's—Morton Backer, Morris J. Kirsch, and Clarence Ware.

BOOK REVIEWS

CHARLES J. GAA

Introduction to Accounting. Robert R. Milroy and Geoffrey L. Carmichael. (Boston: Houghton Mifflin Company, 1949. Pp. xv, 863. $4.50.)

The preface states that among the aims of the authors is the desire to write a book which will be as nearly self-teaching as possible, informal in style, with visual and diagrammatic aids, and presenting adequate material for three semesters. The text is a justification of the expressed intentions.

Being an introductory text, it follows the conventional pattern of balance sheet presentation, differing only in the order of presentation. The illustrations are profuse and detailed, showing full journal entries and ledger accounts. An unusual feature is the diagrammatic illustrations with arrows printed in red to indicate clearly the sources and relationships of the transactions referred to in the text. This makes the explanations quite clear and saves the reader's time in locating the item under consideration. Two-color printing is used effectively in other illustrations.

The style is free and easy. The book is readable and should be understood by students. Each of the thirty-four chapters is complete with questions which allow the students to determine if they have understood the text material, and from one to five problems requiring application in practice of the principles which have been demonstrated. Three complete practice sets are provided at intervals, to be worked as the student advances.

The subjects covered include the fundamentals of bookkeeping and the principles of accounting, supplemented with the usual considerations of the more familiar business practices such as bank reconciliations, interest, bills of exchange, work sheets, and statement presentations. Various forms of proprietorship are discussed. Four chapters are devoted to partnerships; four to corporations. Investments and manufacturing accounts are briefly presented. Several subjects not always included in introductory texts are presented. A chapter is given to each of the following topics: job order costs, process costs, agencies and branches, consolidations, analysis of financial statements, and payrolls.

The book appears to provide an adequate amount of material for a three-semester course. There may be some objection to a three-semester course which leaves a half year open in the curriculum. Perhaps it may be more suitable for a three-quarter course which would run for the entire school year. Doubtless the text may be adapted to either system at the discretion of the teacher or by omission of certain chapters, it could be used for a two-semester or two-quarter course.

A book of forms for working the problems may be obtained ($1.75). These are designed and printed with column headings or rulings in such manner that the grading or correcting of answers should be much simpler than when the forms are prepared by hand. It may be a matter of opinion whether this is best for the student, but there can be no doubt that it saves the instructor's time.

The technical presentation and preparation is good. The type and printing is excellent, with abundant use of bold type and italics. Frequent paragraphing and spacing lessens eye strain and creates a favorable impression.

The authors have obtained their objectives in presenting a readable, self-teachable, professor-saving, three-semester text book. Their knowledge of the subject is self evident. Their understanding of student problems is indicated in the points of emphasis and the design of the questions and problems. Their sympathetic attitude toward the instructor is demonstrated in the detailed diagrams, the accounting forms, and the complete practice sets. It is a very good book.

L. DE R. MACMILLAN

Duke University

Bookkeeping and Accounting. Fayette H. Elwell, Vachel E. Breidenbaugh, and Angeline G. Lins. (Boston: Ginn and Company, 1949. Pp. xvi, 513. $2.76.)

Bookkeeping and Accounting is designed primarily for a one-year course in elementary bookkeeping. According to the authors "the text is directed mainly to two groups of students: (1) to those who are preparing to enter the field of business in any capacity and (2) to those who are preparing to enter a business occupation in which their duties will be concerned chiefly with bookkeeping activities."

The first unit on "Record-Keeping for the Individual" introduces the student to bookkeeping terms and concepts and to the balance sheet equation. A balance sheet is presented by means of a simple listing of the assets, liabilities, and proprietorship of a student.

Unit II, embracing Chapters 2 to 7 inclusive, explains the complete bookkeeping cycle as it applies to a service business. The use of debits and credits to record the effect of business transactions on balance sheet items and income-expense items is first considered. A general journal, a cash receipts journal, and a cash payments journal are next illustrated. The last part of the unit completes the bookkeeping cycle.

Unit III first introduces and explains the use of the inventory, purchases, and sales accounts for a mercantile or trading concern. This is followed by a division of the accounts into real and nominal. Other topics covered in the unit are related to the accounts of a merchant and include an eight-column work sheet, statements prepared therefrom, a purchases journal, and a sales journal. It may be said then, that Chapters 8, 9, and 10 take the student through the complete bookkeeping cycle as it applies to a mercantile concern. A complete cycle problem is a feature of Chapter 12 and summarizes the work covered in the first eleven chapters of the text.

The authors use Chapters 13 and 14 (Unit IV) to explain how combination journals may be used by an in-

surance agency, a mercantile business, a professional office, and a student enterprise. The next two chapters (Unit V) are devoted to negotiable instruments, interest, and note registers. Unit VI introduces other new accounts, i.e. purchases returns and allowances, sales returns and allowances, freight in, sales discount, and purchases discount; their place in the income-expense statement is also indicated. The last part of the unit is used to further refine the cash journals. Accounts receivable and accounts payable controlling accounts and their related subsidiary ledgers are treated in Chapter 19 (Unit VII). Controlling account columns in the various books of original entry are a part of the illustrated material. Adjustments required for accrued and deferred items and the use of a ten-column work sheet are discussed in Unit VIII, along with taxes and pay-roll records.

Interesting subjects covered in the last two units are banking services, business papers and procedures, depreciation, bad debts, petty cash, types of business ownership, and farm records and accounts. Set II, with business papers optional, covers all work discussed in the first 24 chapters and should provide an adequate review of the bookkeeping cycle.

In addition to the practice problems which are contained in each chapter there are supplementary problems available for each chapter. Other features of the text include a glossary of business and bookkeeping terms, a summary section in each chapter, and the generous use of charts, diagrams, and photographs as aids to student understanding.

RAYMOND W. ESWORTHY
Illinois State Normal University

Intermediate Accounting. Arthur W. Holmes and Robert A. Meier. (Chicago: Richard D. Irwin, Inc., 1949. Pp. xiii, 881. $5.)

Professors Holmes and Meier have followed what they describe as a "time-proven and logical sequence" in presenting the material in their *Intermediate Accounting*. They open with a group of four chapters designed to give the student a review of basic accounting procedures, statements, and terminology, including one chapter on "factory costs" for those who have either had no previous cost accounting or who wish to review that field as well. Together with the problems following each chapter, this section certainly affords ample opportunity for thorough review of such matters as work sheets, adjusting and closing entries, and financial statement preparation.

The next division of the text consists of five chapters on corporations. These chapters constitute an intensive and exhaustive treatment of many corporation problems in addition to those generally considered to be of an accounting nature. For example, such topics as the advantages and disadvantages of incorporation, the proper and the improper activities of a board of directors, power of the board of directors to rescind dividends and the procedure for organizing a corporation are covered in detail. A reader gets the impression that the authors were intent upon excluding nothing that might be useful knowledge for an accountant to possess.

Following the material on corporations is a single chapter on "Income Determination and Accounting Valuation," after which the standard practice of discussing in order the principal items of the balance sheet is followed. Cash, receivables, inventories, investments, fixed assets, liabilities, and funds and reserves are considered in that order. Interestingly enough, chapters on consignments and installment selling follow the material on inventory, which implies that the authors regard these as something of an inventory problem. A chapter on "Compound Interest and Actuarial Science," "presented to the extent required for accounting purposes," precedes the material on investments.

The final section of the book consists of a group of four chapters on financial statement interpretation, one of which is an exposition of the preparation and use of a statement of application of funds.

The most noteworthy feature of this work is its completeness. 866 pages of text material and problems give the authors adequate space to cover what appear to be every possible accounting or related problem. Once having read or even skimmed through this weighty work one would almost certainly turn to it as a reference when faced with a new or unusual problem.

Another point which must be mentioned is that although the authors have adopted the more or less standard order of presentation of material and the well-known audit point of view in their discussions, they have not hesitated to pioneer in other respects. The chapter on income determination, the material on appraisals, and a section entitled "Use of Index Numbers" in the last chapter on fixed assets are all aimed at pointing out the inadequacies of present accounting procedures to cope with marked changes in the price level. One can scarcely conclude otherwise than that Holmes and Meier are in favor of adjusting the accounts for price level fluctuations. Further, they do an excellent job of presenting their case; few, if any, have done it better.

One hesitates to express an opinion upon problems with which he has no more than a casual acquaintance, but from a brief survey it appears that this text is exceedingly well supplied with pertinent and interesting problem material. A good many of them are described as "A.I.A. adapted" which, I take it, means that uniform C.P.A. examination problems have been reworked to make them more useful for class room work. An interesting innovation is a one line description of the purpose of each problem immediately preceding the problem itself.

As *Intermediate Accounting* has certain points of difference from other text books in the field, it also has similarities. Unfortunately these appear to this reviewer to be weaknesses. First, there is far too little attention devoted to the important accounting problem of internal control (it fails even to appear in the index). Secondly, attention is directed at the balance sheet account, almost to the exclusion from discussion of related and equally important nominal accounts. And finally, the point of view taken in discussing most topics is that of an independent auditor. Little consideration is given to the internal accountant's task of keeping the accounting processes in satisfactory day to day operation.

As a whole, however, the book is an excellent piece of

work and because of its exhaustive nature and the intriguing material on index number accounting, it represents a valuable addition to any accountant's library. As a text it should be especially valuable in schools where adequate courses in business law, corporation finance, and the like are not offered; for there its extended treatment of all phases of business problems would be most helpful.

In the average college curriculum, use of this work as an intermediate accounting text may prove something of a problem. First of all the size of the text makes coverage of it in a one semester, three hour course extremely difficult. Secondly, much of the material, such as that on index numbers, quasi-reorganizations, and actuarial science, may prove too difficult for the average second-year student, and certainly much of it should be eliminated from any course required of non-accounting majors. Finally, in a well rounded business school curriculum there will be considerable overlapping with the material included in such related courses as business law, corporation finance, and business organizations.

However, the material is well organized and indexed so that an instructor could readily work up a schedule of assignments to exclude subject matter he did not wish covered, thus meeting the objections raised above.

The completeness with which this book covers the field is at once a point of strength and of weakness. At times it reads somewhat like a handbook to be used as a reference by practicing accountants rather than a textbook for undergraduates at the sophomore or junior level. But here again an alert teacher can, through proper emphasis, get full advantage of the text's exhaustive treatment without permitting his students to become lost in the mass of factual material presented.

Professors Holmes and Meier have provided us with another excellent book in the intermediate field. Because of its size and completeness it represents an extremely ambitious project but one which is well conceived and well executed.

ROBERT K. MAUTZ
University of Illinois

Controllership in Modern Management. Edited by Thornton F. Bradshaw and Charles C. Hull. (Chicago: Richard D. Irwin, Inc., 1949. Pp. xi, 241. $4.)

The position of the controller has increased in importance during the past twenty years as business enterprises have moved through one emergency after another—depression, preparation for war, war, contract termination, and the post-war period of readjustment. During this period increased taxation and greater regulation of business enterprises by government increased the burden of controllers. Relatively few books have been published on controllership. In 1940 there appeared *Controllership: Its Functions and Technique* by John H. MacDonald, which was largely a compilation of material previously published in the year books of the Controllers Institute of America and in *The Controller*, the monthly magazine established by the institute in 1934. There followed two slender but valuable volumes, representing Dickinson lectures at Harvard: *Accounting in the Administration of Large Business Enterprises* by Charles A. Heiss, published in 1943, and *The Comptroller: His Functions and Organization*, by J. Hugh Jackson, published in 1948. In 1947 David R. Anderson's highly regarded 528 page textbook, *Practical Controllership*, appeared. In addition a number of pamphlets on controllership have been published by the Controllers Institute and by the Policyholders Service Bureau of the Metropolitan Life Insurance Company, and there have been a number of magazine articles, principally in *The Controller*. To this body of literature is now added *Controllership in Modern Management*, which is annnounced as the first step of a long-range plan by the Controllers Institute of America and the Controllership Foundation to bridge the gap between the theory and the practice of controllership. The book is a series of nine essays, ranging in length from ten to sixty-eight pages, by ten men well-known to readers of accounting literature. A brief statement on each chapter follows:

Chapter 1. Top Management Looks at Controllership, by B. C. Heacock, Chairman of the Board, Caterpillar Tractor Company. This stresses the point that management looks upon the controller, not only as an accountant, but as a skilled analyst and interpreter of business facts who can aid the various levels of management in meeting their problems.

Chapter 2. The Growth of the Controllership Function, by J. Hugh Jackson, Dean, Graduate School of Business, Stanford University. This presentation of the growth of American industry and the development of the position of the controller in American business and government is largely a restatement of portions of Dean Jackson's scholarly Dickinson lecture at Harvard, referred to above.

Chapter 3. Organized Co-operation Among Controllers in the United States, by Arthur R. Tucker, Managing Director (Retired), Controllers Institute of America. This tells of the co-operative efforts of controllers working on their common problems, with governmental agencies and quasi-public bodies like the New York Stock Exchange, through their first over-all organization, the Controllers Institute of America, from the time it was founded in 1931.

Chapter 4. Controllership's Contribution to Executive Management, by David R. Anderson, Treasurer, W. B. Saunders Co. This, the longest chapter in the book, is largely an abridged presentation of sections of Mr. Anderson's text, *Practical Controllership*, with some new material added. The chapter is subdivided into four sections: (1) The Kinds of Information Needed by Management; (2) Technical and Human Problems; (3) Major Policy Problems; and (4) Other Controllership Functions; Qualifications and Training for Controllership. In the last section the author frankly discusses the question, "Are accounting skills and social skills incompatible?" He also examines the arguments for subdividing the controllership functions among several company officials and particularly of setting up the internal auditing work in a separate department.

Chapter 5. Problems of Controllership Organization, by Christian E. Jarchow, Vice-President and Comptroller, International Harvester Company. This applies sound basic principles of management to the controller's par-

ticular problems of administration. The decentralizing of the controller's responsibilities, both staff and line, into assignable segments is discussed first, followed by a discussion of such personnel problems as recruitment, training, job evaluation, and morale.

Chapter 6. Selection and Training of Controllership Personnel, by Keith Powlison, Vice-President and Controller, Armstrong Cork Company. Mr. Powlison states that business needs as controllers strong, broad-gauge men competent in social skills. He believes that sufficient numbers of this type of man are not entering private industrial accounting upon graduation from college because this field is not understood, and as a result the broad-gauge men enter the operating (sales and production) phases of business. To correct this situation he recommends that industrial accountants teach in colleges on a part-time basis and that students be urged to decide upon industrial accounting as a career as soon as possible after entering college. He feels that the latter step would not result in too early and too great specialization but just the opposite—that the industrial accounting student would get more out of his general courses because he would be trying to see the possible applications of this material to his work later on in his chosen field. The author also stresses the importance of placing good men in supervisory positions as early as possible to aid in the development of social and administrative skills which will enable them to apply accounting techniques effectively.

Chapter 7. Education for Controllership, by Richard L. Kozelka, Dean, School of Business Administration, University of Minnesota. Dean Kozelka believes that although controllership is relatively young, it has reached a stage of maturity where systematic preparation for the profession is possible. This covers three broad areas—technical skills, broad background of information and understanding, and internship programs. The needed techniques call for courses in accounting, auditing, budgeting, cost accounting, statistics, personnel management, finance, business law, and economic principles. Effective use of the written and spoken word is particularly desirable, since the controller must often achieve results more by persuasion than by command.

Chapter 8. Human Reactions to Standards and Controls, by John D. Glover, Assistant Professor of Business Administration, and Fritz J. Roethlisberger, Professor of Business Administration, Harvard Graduate School of Business Administration. This chapter deals effectively with a subject which usually gets less attention than it deserves in textbooks. Standards and controls are here to stay, but it must be recognized that the typical standard or control figure is necessarily only an approximation. Frustration in employees, with unhappy results for all concerned, may be produced when these important tools of management are in the hands of an executive who is oversold on the alleged accuracy of the standards under any and all conditions. The over-all effectiveness of these tools depends upon securing the wholehearted co-operation of the people whom they affect. The authors advocate obtaining, where feasible, the active participation of the people affected by projected standards in the establishment of the standards in the first place. This reviewer strongly recommends the careful reading of this twenty-two page chapter to all who deal with budgets, standard costs, and sales quotas.

Chapter 9. Controllership and Public Relations, by Frank M. Surface, Executive Assistant to the President of the Standard Oil Company of New Jersey. A nationwide survey in May, 1946, by the Opinion Research Corporation showed that the vast majority of American workers thought the profits of manufacturers were far in excess of what they actually were. A survey for the Controllership Foundation disclosed that almost one-third of all the people interviewed believed that a handful of wealthy men owned most of the corporations in America. Another survey indicated that a majority of the people have difficulty reading financial statements. Mr. Surface believes it is the responsibility of controllers to see that their companies, through annual reports and other media, tell the story of business to the public in a way that will correct these dangerous misunderstandings and awaken the people to an appreciation of the American free enterprise system.

Some overlapping of subject matter among the chapters is almost inevitable in a volume of this type, but this is not a serious drawback. This reviewer believes that controllers, students, and teachers will find this handy volume of 241 pages a valuable addition to the growing literature of this relatively new field.

Robert I. Dickey
University of Illinois

Mine Accounting and Financial Administration. Frank Willcox. (Toronto: Sir Issac Pitman & Sons (Canada), Ltd., 1949. Pp. vii, 489. $7.50.)

The method of presentation of this text-book is to explain briefly the various phases of mining operations and then unfold the manner in which they are reflected in the accounting records. While it has been written "to retain its simplicity so that the most junior student may be able to keep pace with the work as he progresses in his study of the successive stages of the metal-mining industry," a knowledge of general accounting is prerequisite to its use.

Mining and milling terminology and operations are well explained and described, though practically all references are to gold mining operations. This is justified as the number of properties in Canada exploited for precious metals far exceeds that for base metals, and gold mining in normal times is, next to wheat, the most important single item in the national economy. In addition, almost all the basic accounting and financial administrative procedures are common to both types of mining operations.

After discussing prospecting, exploration and preliminary development, incorporation procedures and financing through stock sales are considered, with emphasis on current Canadian practice. Underground development operations are then described. At this point, the function of mine accounting is stated and the system is outlined, with the next four chapters being devoted to enlarging upon the procedures for purchases, materials requisitioning, labor and residual accounting records.

A chapter on production and milling operations and their related process cost techniques follows, and the

handling of distributable expenses is treated last. Refinements are presented in a chapter on advanced cost accounting methods.

Depreciation and depletion are briefly but adequately reviewed, and the chapter on ore reserves is interestingly done. The section on the valuation of a mining stock through the determination of the present value of the company's estimated eventual liquidating value is highly theoretical and of doubtful value to the book. The discussion of investments in mining company stocks in the chapter on mining company administration is most readable.

Test questions with solutions are provided for each chapter; the solutions in the majority of cases are references to appropriate pages of the text, though direct answers and amplification of the text is given in some instances.

For readers outside of Canada the utilization of approximately one fourth of the book for four appendices covering the history of the Canadian mining industry, Canadian taxation effecting mining, Canadian excise taxes, and Canadian foreign exchange control is regrettable, although it provides a basis for comparison with similar legislation in their countries. A sample smelter return and a list of suggested readings for mine accountants comprise the two remaining appendices.

To close, this is a welcome addition to mine accounting literature, of which there is a scarcity.

GERALD MAXFIELD

Caracas, Venezuela

Audits and Examinations, Standards and Procedures. Christian Oehler. (New York: American Book Company, 1949. Pp. xi, 570. $5.25.)

This book is based upon mimeographed notes and a former text written by the author; but it is completely new and modern in every respect. While there is nothing startling about the subject material or the arrangement of the material in the book, the reviewer feels that it is a definite addition to the field of auditing writings. The author has, in accordance with his stated intention, kept the discussion of accounting theory to a minimum. Accounting theory is discussed briefly only in those cases where it is absolutely necessary. Certainly this is to be commended. Too many books which purport to be texts on auditing give the major portion of the space to expounding the "pros" and "cons" of various accounting theories. In arranging the accounting curriculum of most schools of business, the course in auditing usually is placed so that the student is presumed to have a working knowledge of accounting theory. Thus the student is concerned primarily with auditing procedures and standards. Professor Oehler has obviously been well aware of this in writing the present book.

While this book has been written as a text for use in courses in auditing, the professional practitioner should find it a very useful guide to sound, specific auditing procedures, techniques and standards. The book is indexed and cross-indexed by means of section and paragraph numbers in such a way that it can be used easily and quickly as a reference work.

The approach to the subject of audits and examinations is the practical one of "what to do." The book was written with the three following questions in mind:

"1. What is the proper procedure?
2. What are accepted auditing standards?
3. Why are the various steps of verification taken?"

The subject matter is essentially the same as that presented in most auditing textbooks. The first two chapters have as their purpose the explanation of the steps to be taken in preparation for the field work and the explanation of the duties of the various members of the auditing team. Chapter three discusses general steps to be taken in beginning the field work. Chapters four through nineteen take up in detail the auditing of the various balance sheet accounts. Chapters twenty through twenty-two deal with the income and expense accounts. Chapter twenty-three explains the writing and presentation of the audit report. Chapter twenty-four discusses the many types of auditing evidence and gives consideration to the extent to which an auditor should rely upon each type. This last matter is not discussed in many books and therefore is a very important chapter in this text.

The book has certain features which merit special comment:

1. A rather complete discussion of internal control is given in an early chapter. In each section of the book the elements of proper internal control for the item under discussion are explained and the effect of adherence or non-adherence to such control upon the conduct of the audit is explained.

2. A clear and concise discussion of the extent to which the auditor should depend upon the system of internal control, clients' personnel, etc. is given.

3. Verification procedures are explained thoroughly in each section but in such a way that the reader is not confronted with a long list of steps to be followed.

4. The examples used are clear-cut and explicit.

5. The author has successfully kept the point of view that the prime purpose of auditing is not the detection of fraud and errors but is rather the proof of the accuracy of the statements as prepared by the client's staff. One is made aware of the fact that the auditor is not a detective and yet that he must be alert to the possibilities of irregularities which may have occurred.

If a criticism were to be made of this text it would be that there is no detailed discussion of the auditing of the manufacturing cost accounts. Yet, this is not a criticism of this book alone but rather of all auditing texts. Accountants in general and professional accountants in particular make much of the fact that the income statement has surpassed the balance sheet in importance, and still the verification of this statement is given only passing notice in most auditing textbooks. Professor Oehler is to be commended on the fact that he has done more with this section of his book than most writers have.

The book is well written from cover to cover and merits investigation by all instructors and practitioners in the field of auditing.

GLEN G. YANKEE

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Income Tax Procedure. J. F. Sherwood and C. R. Niswonger. (Cincinnati: South-Western Publishing Co., 1948. Pp. 223. $3.75.)

One is impressed by the determination of Messrs. Sherwood and Niswonger to make the introduction to tax accounting as palatable as possible. As experienced tax instructors, they are only too well aware of the dismay of many students on being initially introduced to the subject. Few students can negotiate satisfactorily the subject of tax accounting using the bare code and regulations. The authors avowedly have as a principal objective the simplification of the presentation of this material, which is inherently technical and complicated.

The correct balance in a first course among the seemingly conflicting factors of correctness, completeness and oversimplification is not easily established. No one can produce tax experts in a one-semester three hour course. As of now few curricula provide for more than one course at the undergraduate level. If our accounting students can avail themselves of just one course, a critical problem of course content is presented. This text is the particular solution offered by these authors.

This semester course is divided into eight units plus the introduction and supplementary practice work. Of the 223 pages of content, 106 pages consist of practice assignments. These practice assignments are made up of tax forms and questions with space for answers and are intended to be removed and submitted to the instructor after solution as the course progresses. (The text is wir-o bound.) The supplementary problem section is intended as an "expansion link."

As to content and arrangement, the first seven units are similar to the booklets of specimen filled-in returns furnished by the leading tax service companies. There is in each unit a brief non-technical general presentation of the subject followed by a solved model example. This is in turn followed by the practice assignments.

The authors are not offering their treatise as an exhaustive treatment of any phase of the subject. They do, however, offer it as a suitable introductory one-semester course. Its suitability as the main text is open to question, but this reviewer admits the answer may well depend upon the overall tax curriculum being offered at any particular school. As an auxiliary text, however, it can readily be recommended.

The text lacks two essential qualities in this reviewer's opinion which restricts its usefulness as a main text. First, the discussion material does not give the references to the code and regulations which, after all, are the basic text. Such references would permit the student to pursue the subject further and to become acquainted with the basic source. This objection, of course, does not detract from the non-technical presentation as presently contained in the text.

The second limitation is the fact that the authors do not give proper consideration to the overall subject of "basis" and the several types of sales and exchanges. It is true that these subjects are difficult, but they are the essence of tax accounting.

These omissions are deliberate, of course, in the interest of simplicity, but their omission has, in the opinion of this reviewer, resulted in over-simplification and restricted scope.

While one may question the selection of scope and depth of content of the text in view of a particular tax accounting curriculum, the presentation of this particular selection is clear, logical and interesting.

James O. Eaton
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Sources of Business Information. Edwin T. Coman, Jr. (New York: Prentice-Hall, Inc., 1949. Pp. ix, 406. $4.50.)

No one short of a professional librarian could effectively bring together under one cover the key to the vast field of business publications. This book is not only a reference to the sources of business information, but it is also a guide to selected readings in some of the more popular fields of business specialization.

The book, addressed to the businessman, aims at four objectives: (1) Locating statistical information; (2) Synthesizing publications in a given field for self-evaluation; (3) Offering a key to storehouses of business publication —libraries and other sources through which references can be obtained; and (4) Aiding the ambitious person in self-improvement for the job ahead.

To accomplish these objectives, the author presents the material from three different approaches: (1) The first four chapters deal with methodology, location of sources, sources of general business information, and sources of current business developments. (2) Chapters V through XI contain sources of information and selected readings on the differentiated business functions of statistics, finance, real estate and insurance, accounting, management, distribution, and industrial relations. (3) Chapters XII through XIV are organized on the basis of basic industries, rail, air, and motor transportation, and foreign trade. Chapter XV, the last chapter in the book, contains a suggested bookshelf for the progressive businessman.

A book of this nature would be worthless unless it were compiled in a systematic manner. Coman establishes a logical organization pattern and follows it throughout the book. Each chapter begins with the listing of bibliographies, handbooks, and yearbooks. Trade magazines and bulletins follow. Books and magazines with a broad general viewpoint are next presented. All of these listings are properly annotated. At the end of each chapter appears a summary of sources classified by specialization within a given field such as cost accounting, budgeting, etc., at the end of the chapter on accounting.

While the lists of general references in the first four chapters and the publications classified by industry in the later part of the book are fairly complete, no attempt is made to list all of the publications on the various business functions. In line with the objectives of the book, the author felt that a selected few annotated listings would be more useful than an exhaustive list of many parallel publications. This viewpoint is well taken. Since the selections are adequate and quite representative, the book is enhanced considerably.

Judging from the title one expects to find a tiresome list of statistical sources; but that is not the case. It cannot be said that the selected readings are mere sources of information. They cover in reality the sum total of the fundamental knowledge and philosophy related to the various business functions. The selections are well made and the annotations are most helpful; however, since the content of these selected readings, on management for instance, ordinarily are assimilated over a period of seven years of university training, the amount of knowledge an average businessman can amass by casual reading is questionable. It is not to be inferred, of course that the author had in mind the use of these readings as a substitute for university education. On the other hand, all of these selected readings could be effectively used as a supplement to college training in recognition of the fact that many trained college graduates are in fields other than those for which they had been trained.

While the author suggests that the businessman use the book as a means of self-evaluation, it can also be used by professional men as a guide to broadening their horizon in fields other than those of their own specialization.

A. J. Penz

University of Alabama

Introduction to Business. Melvin Anshen. (New York: The Macmillan Company, 1949. Pp. xi, 672. $5.00.)

The latest edition of Anschen's *Introduction to Business* is a revision of his earlier text published in 1941. Developed for use at the freshman level, no attempt has been made to cover the detailed, technical description of business methods. Instead, it is the panoramic view, the social setting and the administrative problems which are stressed.

Its thirty-four chapters are divided into eight divisions, as follows:

(1) Business and Society. A study of the historical background of the modern business world and the private enterprise system.
(2) The Basic Tools of Business Administration. Accounting, statistics, library and market research, followed by a discussion of the various types of business organization.
(3) Production. Materials, machines, labor, labor unions and collective bargaining.
(4) Marketing. Processes involved in the marketing of food and raw material.
(5) Finance. Supplying the capital requirements of business and government.
(6) Selected Problems Areas. These include agriculture, transportation and international trade.
(7) Competition and Risk. A study of monopolies, business cycles and risk sharing.
(8) Business and Government. Social planning, the great issues facing business.

The chapters on accounting and statistics cover thirty-nine pages and are presented in an interesting and understandable manner. How accounting serves management, creditors, owners and the government are taken up in turn. The various types of financial statements and ratio analysis covers some eight pages. The chapter on statistics includes a discussion of sampling, averages, index numbers and graphic presentation. Tables and charts are used to illustrate this phase of the work.

The chapter on library research should not go unnoticed, since the beginner should be given some information on the use of the library and reference materials as soon as possible. Several pages are reproduced from such representative publications as *Who's Who in America*, *Industrial Arts Index*, and *Moody's Manual of Investments*.

The questions and problems usually found in a text of this type are missing. However, each chapter is followed by a glossary and a list of suggested readings. Although the type used in the text might be considered small for easy reading, on the whole this revision has been carefully prepared and should be suitable for an introductory course in business projected at the freshman level.

Harry E. Olson

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